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Educational News and Editorial Comment

THE NATIONAL SURVEY OF SECONDARY EDUCATION

The consulting committee of nine recently appointed by the Secretary of the United States Department of the Interior to co-operate in the conduct of the study of secondary education provided for by an act of Congress met on November 25 with Commissioner William J. Cooper and Dr. Leonard V. Koos, who is assistant director of the survey. The meeting was devoted to a consideration of the subjects which shall be given major attention in the course of the inquiry. Five general fields were agreed upon: organization of secondary schools, administration and supervision, personnel administration of staff and pupils, social and economic status of the secondary school population, and the curriculum and extra-curriculum.

The first field can be described more fully by the statement that the study will inquire into existing forms of the secondary school, including the various types of junior high school and junior college, and will also deal with such differences in organization as appear in academic high schools, commercial high schools, and technical high schools. Under administrative and supervisory problems such subjects will be taken up as the methods of organizing departments and the subdivisions of the duties of the principal's office. In deal-

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ing with personnel problems, the inquiry is very likely to have the aid of an independent staff of investigators which the Commissioner hopes to persuade Congress to provide for a national study of teacher-training. The personnel study of pupils will be extended, as indicated in the fourth item mentioned in the preceding paragraph, by securing records of the careers of graduates of typical high schools and by discovering the social levels from which high-school pupils come in various communities. The curriculum will be studied, not with a view to describing particular subjects, but with a view to determining the extent to which the programs of pupils present a coherent plan of education.

In general, it is not the purpose of this national survey merely to add another statistical or purely descriptive account of secondary schools to such accounts as are now available. Rather it is the purpose of this survey to select and analyze typical practices and conspicuous innovations with a view to giving the public and school officers the information necessary, first, to a complete understanding of the significant trends of American higher education and, second, to an understanding of methods of evaluating local undertakings.

High schools will shortly be asked to co-operate in various aspects of the study, and students of education who have been working in any part of the general field are asked to inform Commissioner Cooper or Dr. Koos of the methods which they are using or have used and the results secured. Opportunities for individual and institutional co-operation are unlimited. While the work undertaken by the Office of Education will be limited to the fields described, it will be helpful if individual investigations can supplement the main study by inquiries into the history of schools and other phases of the subject.

The financial conduct of high schools has not been explicitly included in the program of this study for the reason that there is a movement under way to induce Congress to provide for a general study of school finance.

THE NATIONAL ADVISORY COMMITTEE ON EDUCATION

The following statement was published in the *United States Daily*.

A donation of $100,000 has been made from the Julius Rosenwald Fund to be used in the compilation of information for the National Advisory Committee on Education, the Secretary of the Interior, Dr. Ray Lyman Wilbur, announced November 18 in a statement made public by the Department.

At the same time Dr. Wilbur announced that Dr. Henry Suzzallo, of the Carnegie Foundation, has accepted the appointment of director of this study.

This donation will furnish the means whereby the National Advisory Committee on Education, appointed by Secretary Wilbur and consisting of fifty-one persons representing national, state, and independent organizations, will make a comprehensive study of the relation of the federal government to education. Dr. Charles R. Mann, chairman, in an oral statement calling attention to the significance of the survey about to be made, pointed out that the Committee in its recent meeting in the office of the Secretary of the Interior, October 15, unanimously agreed upon five functions of the federal government the Advisory Committee will study.

These functions are: to gather, compile, interpret, and disseminate adequate statistics of national scope at all levels of education; to conduct research on basic educational problems of national significance; to maintain an adequate library of educational works and make it accessible to the public; to maintain a legislative digest and information service to which state legislatures could look for information concerning the laws of other states and foreign countries concerning education; and to furnish experts on request to co-operate in state or community surveys on education.

Before the committee adjourned in October, a plan of action was adopted, and the conference committee, among other instructions, was called upon to find funds with which to employ a full-time director and several part-time experts to assist in the study.

"JUNIOR-SENIOR HIGH SCHOOL CLEARING HOUSE"

The publication entitled *Junior High School Clearing House*, which was edited by S. O. Rorem and others, has been taken over by Philip W. L. Cox and a group of co-operating editors and will hereafter appear in expanded form under the title *Junior-Senior High School Clearing House*. The following paragraphs from the introductory editorial in the first issue of the new journal state the aims and plans of the publication.

Mr. Rorem continues as an associate editor of the *Junior-Senior High School Clearing House*. Many of the sponsors and active contributors to the *Junior High School Clearing House* are also associate editors. The active directors of the new journal are members of the Department of Secondary Education of New York University.

As its name implies, the *Junior-Senior High School Clearing House* under-

takes to stress the progressive practices of secondary schools and the significant points of view of those who are actively engaged in dealing with the vital problems of adolescent education. The editors will welcome explanations of innovations, programs for educational developments, and discussions of procedures, whether favorable or unfavorable to policies advocated by writers in these pages.

Editorials are signed and represent the present beliefs of the writers. No unity of opinion will be maintained in these columns except as the various editorial writers may agree among themselves.

While most of the articles, editorials, and book reviews will deal with the central theme of each number as indicated on the inside front cover, such segregation of material will not be allowed to become artificial. Peculiarly valuable and timely articles may appear in any issue. The editors hope, too, that out of each issue may grow correspondence from readers of the magazine who may wish to write supplementary articles or to take issue with statements that have appeared in previous numbers of the journal. Many articles originally scheduled to appear in the early numbers of the journal will have to be postponed until a later date because the authors have been unable to complete them in time for publication.

Manuscripts dealing with actual or proposed practices in any of the aspects of secondary education mentioned above should be sent to Miss Dorothy Mulgrave, Managing Editor, School of Education, New York University, Washington Square East, New York, N.Y.

INDUSTRIALISTS AND EDUCATIONAL REFORM

The National Industrial Conference Board, 247 Park Avenue, New York City, recently published a book entitled *Public Education as Affecting the Adjustment of Youth to Life*. This book was prepared by a number of writers after a conference in which educators and industrial leaders considered the relation of American education to the life upon which young men and women enter when they take their places in the trades and the professions.

On the whole, the book is adversely critical of public education in this country. A recommendation is made in the following paragraphs for a first move toward the improvement of existing conditions.

Recognizing that some maladjustments must necessarily exist between the prevailing school system and the rapidly changing economic conditions under which most young people must earn their living, because of the difficulty of keeping educational methods in line with vocational needs so constantly fluctuating, and aware also of the value and necessity of sound, constructive

analysis, the National Industrial Conference Board saw a need for an impartial appraisal of this situation.

At the outset, the Conference Board realized that men of industry do not have a sufficiently broad understanding of all the factors involved in the relationship of education to vocational life to qualify them alone for such a task of inquiry, and that their judgment might be influenced by their own vocational needs. Likewise, it felt that a similar observation could justifiably be made with respect to professional educators who were lacking in adequate knowledge of business life and requirements. Seeking balance of experience and viewpoint, the Conference Board therefore asked representatives of both these groups to assist it as an Advisory Committee in making a study.

The Conference Board set itself and its Advisory Committee the task of considering the general nature and extent of present maladjustment between industry and the public-school system as disclosed by the more prevalent criticisms of our public schools, of determining the major issues underlying these criticisms, and of suggesting a constructive approach toward solving the problems therein indicated, thus pointing the way to a more complete adjustment between educational and vocational interests. . . . .

It is the hope of the National Industrial Conference Board that a broad and thorough survey may be undertaken jointly by public-spirited men and women of the highest ability and broadest experience, selected co-operatively to represent all the spheres of interest. Such an educational-survey group could well be charged with careful study of our educational problems and intrusted with the important task of definitely suggesting how best to synchronize educational methods with the ever changing needs of society.

The chapter entitled "Proposals for Research" is perhaps the most stimulating section of the book. In this chapter the following list of "areas of public education now most needing research" is presented and discussed.

1. General fields of educational research.
   a) Measures of accomplishment. The methods of measuring results may not be those hereinafter suggested, but, wherever sound bases can be found for the measuring of results, they ought to be applied.
   b) The educational requirements of occupational fields.
      (1) A study of the essential educational requirements of the major vocations of today in terms of both their academic and technical content.
      (2) A study of the qualities of character and traits of personality required by the major groups of occupations.
   c) Types of political control and financial support. What types of control can best supervise and administer our public systems of education, and how and in what measure can their financial support best be obtained and distributed?

2. Special fields of educational research.
   a) The reappraisal of the values and methods and fields for vocational education.
   b) The adjustment of handicapped children. This should cover a study of the outstanding and prevalent difficulties of economic adjustment encountered by those young persons from fourteen to twenty years of age who are of less than average ability and who at the same time are practically under the necessity of becoming in large part, if not entirely, self-supporting during these years.
   c) The training of teachers. A study to determine the minimum requirements to be established for the training of teachers of various grades.
   d) Subject matter. What is the proper subject matter today of public education? What are those mental disciplines and studies that come most vitally within our experience and assist us in adjusting ourselves to life?

The book is worthy of careful study by high-school teachers and administrators. There certainly can be nothing but the most cordial agreement among educators with the proposal that leading representatives of the nation join in a renewed effort to solve by scientific studies the problems suggested. In a few centers in the American educational system energy is now being devoted to the study of these problems, but the available energy is far from adequate. If the industrialists have come to a realization of the gravity of present-day educational problems, the outlook is bright for a vigorous attack on them.

COLLEGE ATHLETICS AND HIGH-SCHOOL BOYS

C. W. Whitten, secretary of the National Federation of State High School Athletic Associations, has presented to a number of the associations which belong to the Federation a statement which deserves careful consideration by all who are interested in the welfare of high schools. The statement is as follows:

The writer has long believed that most of the difficulties that arise in the administration of high-school athletics are due to the inclusion in the athletic program of many activities that can find no legitimate justification in a program primarily designed to promote educational objectives. For instance, the tremendous emphasis which is now placed in many, if not most, communities upon the promotion of community prestige through the medium of high-school athletic teams can scarcely find any justification if the thing we are after is the promotion of those educational aims which the modern secondary school is ordinarily conceived to stand for. One of the least desirable of the "fruits" of this community-prestige ideal is the attitude of tremendously exaggerated eulogy amounting in some instances almost to adulation in which the successful

athlete or the winning team is held by the community. In a large majority of cases this attitude is most demoralizing to the boys and is certainly destructive of the educational interests.

There can be no doubt that much of this deplorable situation is chargeable to the example set by the colleges. We have reached that stage in our development of the processes of "higher education" in which the standing and repute of a college are based, particularly in the eyes of its more vocal alumni, quite largely upon its athletic achievement, and in which the highest collegiate honors, in so far as publicity and popular acclaim are concerned, are unquestionably accorded to the successful athlete as to students and to the successful coach as to the faculty.

Again, it seems probable that this attitude of the colleges is imposed by the highly commercialized status of intercollegiate athletics, particularly intercollegiate football. Consideration of the box office is fully as prominent in intercollegiate games as in the most completely professionalized contests. This necessitates the press-agenting of stars and superstars with all the accompanying ballyhoo and buncombe that attend any other intensified advertising campaign. To be sure, the promise of outstanding performance constitutes the most effective means of inducing the public to "loosen up." So the modern college *must have its athletic stars or lose caste.*

Moreover, in the general estimate of a community no higher honor can come to a high-school boy than that he should be "sought" for by the various colleges through the somewhat intricate system of solicitation that has developed from the intense athletic rivalry existing among the colleges. If a high-school boy can succeed in making some sort of arrangement whereby his college expenses will be taken care of on the basis of the delivery of certain satisfactory athletic accomplishments, the community in general is disposed to think that the boy is getting only his just deserts and that he is entitled to any award he can bargain for on the "value-received" theory. That there are any considerations of honor, integrity, and good sportsmanship involved in these competitions of the colleges for athletic material is set aside as a sort of fantastic, almost humorous, vagary designed to appease the idealists in the educational world and quite universally ignored by the real practical, red-blooded, he-man directors, coaches, scouts, alumni, and fans to whom the athletic program of the colleges must look for success.

The most authentic information available relative to the situation at the University of Iowa would certainly seem to justify this cynical attitude relative to the practices of the colleges. It is not necessary here to review the facts in this case. Indeed, specific facts have not been given publicity, but, in general, it is charged that "friends" of the college, with the full knowledge of certain college authorities, have maintained a "slush fund" to be used in securing for the University of Iowa promising athletic material. It is further charged that the director of athletics who was opposed to this system and who fought it persistently lost his position because of his uncompromising attitude. The practices laid at the door of the University of Iowa being contrary to the rules

of the Intercollegiate Conference, the University has been dropped from membership in the Big Ten. Or perhaps it would be more accurate to say it has been "threatened" with suspension for the suspension is not to be effective until January 1 to the end that the University of Iowa may have an opportunity to reform its practices and also to cash in on the exaggerated interest the public will now have in all of its contests because of the highly valuable advertising it has secured through the publicity which has been given to its misdeeds.

College men who may be presumed to have definite information, as well as the most conspicuous sports writers throughout the country, assume that the University of Iowa is guilty as charged. However, the general attitude is: What of it? The idea given most common expression is that everybody else is doing it, why penalize Iowa? Don Maxwell in the *Chicago Daily Tribune* of June 10 quotes twelve other specific cases of violations of Big Ten rules by various members of the Conference. With regard to some of these, he claims specific information. Others he admits are based on rumors but with great probability of truth. Charges and countercharges have flown thick and fast, but, action having been taken relative to the University of Iowa, there seems to have been a disposition to "soft pedal" all other charges.

A particularly interesting bit of information was given by the coach of an Indiana high school who, according to published items, stated that it was a common practice for college coaches to attend the Indiana state basket-ball tournaments, the intimation being that it was with a view to looking over the material with the idea in mind of exerting available influences to secure star athletes for college teams.

It may be said in passing that this is one of the prime objections which high-school principals have to the so-called "National Basketball Tournament." It really becomes a sort of sweepstakes exhibition in which conspicuous high-school coaches throughout the country display their wares before the assembled college basket-ball coaches, whose interest in the games and in the players is far more than purely academic. In fact, the National Basketball Tournament may not inappropriately be compared to a fat-stock show in which the producers exhibit their wares before a host of buyers. It is the belief of practically all high-school principals that such practices are injurious to the boys themselves and place a tremendous handicap in the path of the legitimate purposes and methods of high-school education.

In view of the apparent indifference to these practices on the part of the general public, it is difficult to say what should be done in the premises. Advocates of interscholastic and intercollegiate athletics place tremendous emphasis upon the development of honor and sportsmanship inherent in such contests. But how can we continue to maintain such a faith in the face of the almost universal resort to subterfuge and fraud on the part of the colleges in evading, through their recruiting practices, the rules and agreements into which they have voluntarily entered? Is it not likely that our athletic activities are in great danger of developing in the minds of our high-school boys and of the community at large that "practical" ideal which seems to be so common in many higher-

up circles in business and politics as well as in sports that the only test of the legitimacy of a deed is the ability to "get away with it"?

The writer has no hesitancy in saying that his experience leads him to believe that the ideals and practices of high-school men responsible for interscholastic athletics are on a very much higher plane than are those of the college men. If this is true, it is no doubt because high-school men are not subjected to the same pressure. At the same time, it is by no means uncommon to see really high-grade high-school administrators lose their positions or their authority because they have taken an unreserved stand in favor of a sane administration of the athletic activities of the high school. There can be no doubt that college directors and coaches are subject to tremendous demands from many sources to produce a successful team regardless of methods employed. And it seems to this writer that the situation is not going to be greatly improved through the Iowa experience. When the average college coach or director considers "what happened to Belting," he is going to ponder with some care any projected course of resistance to the demands of those groups who can bring influence to bear upon the college administrators.

In the matter of the development of high ideals of honor and integrity on the part of the high-school boy, we can scarcely conceive of anything more demoralizing than that he should accept from a college special rewards for his athletic ability in contravention of announced and understood rules and agreements. And we maintain that as long as such fraudulent practices prevail, we can really have very little to say in support of the general thesis of the character-building influences of athletics.

TYPES OF SECONDARY SCHOOLS

The chaotic state of opinion regarding what is most to be desired in secondary education is evidenced by the recommendations made by present-day writers and speakers. A number of pronouncements have recently appeared which illustrate points of view that differ radically from one another. *School Topics*, the official publication of the Cleveland public schools, contains the following statement by Daniel W. Lothman, principal of the East High School.

Fifty years ago, with the exception of parochial schools, there were few private schools in Cleveland. At that time most of the wealthy sent their children to the public schools. In fact, it was the general belief that those who sent their children to private schools paid dearly for the social benefits because of the inferior intellectual training received. This applied especially to schools of high-school grade.

Today, however, few of the so-called "rich" send their children to public high schools. On the contrary, they prefer the private college-preparatory schools, not only for social reasons but also because they believe that the instruction in those schools is superior.

These people will tell you that they expect to send their boys and girls to

college, perhaps to some college that admits through the examinations of the College Entrance Examination Board of New York City, namely, Harvard, Yale, Princeton, Wellesley, Vassar, Smith, Mt. Holyoke, Bryn Mawr. They say they cannot afford to run any risk of their children failing to pass those examinations. In other words, the notion prevails that the public high schools, as college-preparatory schools, are for those who cannot afford anything better and that those who want the best must pay for it at some private school.

This belief prevails not only in Cleveland, whose schools admittedly are in the front rank of the public-school systems of the country, but is even more prevalent in other cities. I know of two noteworthy exceptions, though, no doubt, there are others. One is the famous Boston Latin School of Boston; and the other the New Haven Classical High School of New Haven, Connecticut, both of which have the reputation of being the equal of the best college-preparatory schools.

The opposite point of view is taken in the following statement published in the *United States Daily*.

The superintendent of public instruction of California, Vierling Kersey, in a recent oral statement favored the elimination of Latin and Greek studies from high-school curriculums.

Explaining the reason for their proposed rejection, Mr. Kersey said that they are without value and students can more profitably spend their time on subjects worth while.

In place of the ancient classics, the superintendent of public instruction of California would substitute subjects dealing with what he terms the basis of the new American culture, the essence of American democracy, the new vocabulary, the new sciences, studies in commerce, and instruction upon how to buy on the instalment plan.

Mr. Kersey viewed the instalment plan as "consumer's credit," which he believed ought to be taught in the public schools. "Regardless of the merits of the practice," Mr. Kersey said, "the fact remains that it is here, and that 'consumer's credit' is fairly universal in its usage. It would be wise and practical, therefore, to inform the students in the principles of the system, so they may use the privilege intelligently."

Explaining the American culture he seeks to foster in the high schools, Mr. Kersey said: "It is to be a dynamic culture, marked by a distinctive enthusiasm and the willingness to undertake anything. It is not to be a borrowed culture but something original."

A compromise plan is suggested in the following statement published in the *New York Sun*.

Special high schools, designed to meet the needs of three different types of school children, must be established within a short time, A. Mortimer Clark, principal of the De Witt Clinton High School, said at a meeting of the High

School Teachers Association held at the Hotel Astor. He predicted that such special schools will be organized along three lines—a school for bright students, another type of school for children of ordinary ability, and a third for those who are "misfits" in the present scheme of organization.

The high school for bright students, according to Mr. Clark, will be a college-preparatory school, in the main, although it will be vocational as well as academic. Requirements for graduation from this school will be higher than present high-school requirements. Bright and industrious students, he said, are entitled to such a school, at least one for each borough.

The high school for ordinary children, as described by Mr. Clark, will be similar to the present-day high school. The requirements will be the same as at present, but the course of study will be modified to prepare the students for adult life.

A third type of school, he said, will be designed to take care of present misfits. Mr. Clark added that only 10 per cent of the so-called "misfits" in schools of today are really incapacitated, the rest being either unambitious or victims of the "insidious habit" of daydreaming. In this type of school, he said, classes will be small, and specially trained teachers and administrators will seek to develop the individual interests of the students.

"The age of the special high school is almost upon us," Mr. Clark told his audience in his discussion of the high school of the future. "The special high school must come, if in the interest of economy alone. We must have separate high schools for the separate types of children in our schools. The problem of segregation demands attention. The problem is pertinent now, and we owe its solution to the children, our future citizenry."

According to Mr. Clark, the children who come from the elementary schools are "distinctly intelligent." Few are subnormal. Some are unprepared; some are too young and immature, but few are unable to do high-school work, he said, adding that high-school teachers are "not altogether blameless in the matter of the misfits who clog the high schools."

PROJECTS IN SUPERVISION

The following statement is quoted from the *Education Bulletin* published by the Department of Public Instruction of the state of New Jersey.

The Conference Course in Problems of Supervision in Secondary Schools given at the Ocean City Summer School in July was attended by eighteen high-school principals and supervising principals. Two of the three hours assigned to the course each day were spent in discussion of actual and pressing problems of the schools represented and of solutions proposed by the member of the class who presented the problem or suggested by other members. The third hour was spent with Dr. Wetzel's class in Administration and Supervision.

Most of the members of the course spent several hours each day in examina-

tion of published material bearing on their problems or in the preparation of course reports.

One of the definite outcomes of the course was the adoption by the several members of particular plans for the improvement of instruction in their schools during the present school year. The following partial list of projects proposed by members of the course shows the directions in which the principals feel that improvement is needed.

1. To make a case study of each pupil who failed of promotion last year
2. To attempt to teach the Freshmen how to study (through home-room instruction and placing in their hands study helps for their particular subjects)
3. To secure certain helpful books for the teachers' library and advise teachers about their reading
4. To discuss in faculty meetings the bulletin on *Cardinal Principles of Secondary Education* together with suggestions from Dr. Wetzel's course
5. To secure another clerk in the office to release the high-school principal from office tasks that more of his time may be devoted to supervision
6. To budget the principal's time that none of it may be frittered away in minor tasks or routine
7. To try to keep the standards high but elastic enough to meet the needs and abilities of the boys and girls
8. To hold each child to his best
9. To teach teachers to work on the basis of facts
10. To revise the system of records
11. To give only constructive criticism
12. To have faculty make specific study of tests
13. To have faculty study extra-curriculum activities
14. To work for exact thinking, answering, and questioning
15. To obtain better salaries for teachers
16. To have a definite objective for each teachers' meeting
17. To provide better for individual pupils in bookkeeping
18. To secure more pupil activity and initiative
19. To provide more and better teaching materials
20. To use these materials in providing suitable experiences for superior pupils and particularly for inferior pupils
21. To try to interest parents in pupils' problems
22. To encourage teachers to read carefully some of the newer literature on high-school methods
23. To try a longer class period with supervised study
24. To have the teachers work and study constantly on the curriculum
25. To find more time for classroom supervision
26. To encourage teachers to try self-rating and to seek comparison of their own rating with the principal's rating
27. To make teacher-rating fairer

28. To seek more positive and consistent health objectives
29. To encourage and vitalize the student organizations

While no member of the conference plans to concentrate his effort on more than a few of these projects, it is to be expected that actual improvement in instruction will result from definite emphasis on any one of them. The instructor has arranged for special individual conferences later in the year on the methods employed and the progress achieved.

TRAINING AND RATING IN INDUSTRY

In the chapter on "Management" in Volume II of the report of the Committee on Recent Economic Changes of the President's Conference on Unemployment, published by the McGraw-Hill Book Company, Henry S. Dennison makes the following statement.

In spite of the obviously shorter learning periods required for many of the newer jobs, the interest in training aroused at the time of the war has not materially abated. The actual training school, or vestibule school, has almost disappeared, but it is common to find functional supervisors who give attention to the training which now generally takes place in the producing departments, though often in special subdivisions of them. Apprentice-training courses are still used in considerable numbers, though restricted for the most part to a few trades; but special training for aliens, so common ten years ago, has naturally fallen off and, in the few cases in which it exists, is now provided for chiefly by the community rather than the factory.

For foreman training, there are to be found, and apparently in increasing numbers, foremen's conferences, co-operation with the Y.M.C.A.'s and state departments of education, evening classes at the plant in special subjects, and discussion groups. A survey by the United States Chamber of Commerce gave the number of courses for foremanship training as 105 in 1925 and 933 in 1927. The old doctrine that a foreman was to learn his job on the job and from the job is not so often heard.

In a small and growing number of companies, educational opportunities are offered for those beyond foremanship grade; courses in cultural subjects having no direct relation to the business were found in a little less than 10 per cent of the companies of this survey. Some of the larger corporations have carefully arranged job sequences to be followed through under the guidance of a training supervisor. These were especially designed for college graduates but are usually open to others who can pass an appropriate examination.

An interesting special case of training has been developed by the public-relations departments of some public-service corporations. Their corps of "service samplers" continually test the contact of employees and public, reporting the especially good cases by name and the unsatisfactory cases without identifica-

tion. These latter are made the subject of discussions by executives and of large group conferences of "contact employees," at which methods of improvement are considered.

As a means of general education, the company or plant magazine stood high ten years ago, but as such it has been quite widely discontinued. Few other activities related to personnel management have been so curtailed in recent years as the company magazine. Yet it remains in a significant number of cases, ranking now as a method of fostering good will and promoting better acquaintance among all members of the organization rather than as a strictly educational device.

To assist in the orderly progress of employees and to get such objective help as is possible in selecting men for promotion, a few companies have continued and developed the rating scales which came into use during the war. In themselves, rating scales have not gone far, but, even in some of the places where they are undeveloped or have been given up, they nevertheless have emphasized the double importance of correct selection for promotion and the consequent need of the utmost possible avoidance of the distortions of unaided personal judgment. It is more and more widely recognized that, while the importance of choosing the right person for promotion is great in so far as his work in the higher position will affect the company, it is many times greater in its effect on his fellow-employees, who are bound to set the fashion of their performance by what his elevation led them to believe were the accomplishments upon which promotion depends. Rating scales, however imperfect, have shown an advantage in being a down-on-paper statement, usually with important qualities so listed that they cannot be overlooked. They have helped to avoid the day-to-day fluctuations of personal opinion.

Several companies provide a small special committee of department heads to review periodically the rating charts of the entire personnel. They discuss the relative qualifications of various individuals for eventual salary increase or for promotion to advanced positions. Then, when a vacancy occurs, the work of this committee is first canvassed to find whether any members of the organization can be considered in line for the position. In a few companies, such job and man classifications have grown after some years into a standard promotion schedule, with normal lines of progress extending on from each position.

ARTICULATION AND CURRICULUM RECONSTRUCTION

The following statement is made by W. S. Deffenbaugh, chief of the City Schools Division of the United States Office of Education, in a recent bulletin published by the Office under the title *Significant Movements in City School Systems.*

A big problem of articulation that has not been solved is in the field of secondary education, including the junior high school, the senior high school, and the junior college. Each of these units has been working out its own program and curriculum, so there has naturally not been that articulation that seems desirable, resulting in loss of time and of efficiency.

The junior college, which may be found in about one hundred city school systems, has added another unit, making three in all, in those cities having junior and senior high schools, each unit being short—junior high school, three years; senior high school, three years; and junior college, two years. The growing opinion is that better articulation could be effected if the secondary-school program were divided into two units of four years each. By this arrangement the entire city-school course above the kindergarten would be fourteen years in length instead of twelve as at present. This plan of organization is known as the 6-4-4 plan.

Even if the secondary schools were to be organized on the 4-4 plan, many problems would have to be solved. One of these is the problem of economizing time through better co-ordination of work within each unit and between the two units. Only by careful experimentation can this and other problems be solved. Experiment is needed to discover whether all the work now done in the twelve grades above the kindergarten and in the four college years, or sixteen years in all, could be done in fourteen years. Since some city schools of the country are organized with only eleven grades above the kindergarten, and since the graduates of their high schools are admitted to college along with graduates of school systems having twelve grades; since elementary-school work can be done in six years sufficiently well to begin secondary-school work, and since the first year or two of college work is to a certain extent a repetition of the work done in the senior high school or else the beginning of work on foreign languages, science, history, and other subjects, the question may be and has been raised whether the cities that are organizing junior colleges cannot have the curriculums of the eight grades above the six-year elementary school so articulated that two years of time will be saved.

It is doubtful whether the junior college as now organized and superimposed on the high school has brought about better articulation. . . . .

Economy of time has not been effected, at least not for those students working for a Bachelor's degree, since it still requires sixteen years—seventeen including the kindergarten—for a boy or girl to complete the elementary school, high school, junior college, and the last two years of the present college course.

Experiments to discover whether a 6-4-4 organization would be better than any of the plans now widely used could be made without disastrous results, no matter what conclusions might be drawn. In fact, there would be a gain if it were found conclusively that sixteen years of work can be done in fourteen, thus permitting young men and women to begin professional and university courses proper two years earlier and with practically the same general training as they now have when they receive their Bachelor's degree.

The question is: Who will undertake such an experiment in face of the traditional school organization and in face of thousands of critics? Possibly the time is not ripe in most cities for such an experiment, but, if the problem of articulation and of economizing time is to be solved, it can be solved only by experimenting and not by mere discussion and theorizing.

THE HOW-TO-STUDY COURSE IN THE HIGH SCHOOL

C. C. CRAWFORD
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The teaching of study habits has been discussed at length and with considerable vigor for a number of years. It is universally agreed that pupils should be taught how to study and very generally agreed that they are not at present receiving adequate training in this direction. Both college professors and high-school teachers complain of the low quality of intellectual work done by students, and to a large extent they attribute the deficiency to improper study technique. It may be assumed, therefore, that the how-to-study problem is recognized as serious.

There is not such general agreement, however, with regard to the solution of the problem, or the best way to teach pupils how to study. The most common plan in present practice seems to be that of supervised study, under which each classroom teacher personally watches over her pupils while they work and gives guidance and instruction in study technique in connection with the actual studying which the pupils do. Thus, the English teacher teaches her pupils how to study English, presumably, and the history teacher teaches her pupils how to study history, and so on for all the school subjects. Many hours of teacher time are being spent in this activity and paid for in the form of salaries, making a total financial outlay of probably a few millions annually for the teaching of study habits. The writer wonders whether this expenditure is entirely justified by the results being obtained.

As a supplement to the plan of supervised study and to a certain extent as a substitute for it, the writer suggests a more direct plan—that of offering a definite course in how to study resembling the ordinary courses in English, science, etc., so far as credits, hours, teachers, textbooks, and assignments are concerned. The specific aim

of such a course is to teach boys and girls how to study and to develop actual habits of practicing the best study procedures.

The present article, therefore, presents the major considerations which seem to favor such a course and also the major obstacles, objections, or difficulties which will probably be encountered in connection with it.

CONSIDERATIONS FAVORING THE HOW-TO-STUDY COURSE

1. *The how-to-study course is relatively new and different and for that very reason deserves open-minded consideration.* If old methods have failed to achieve the desired ends, then clearly new ones must be tried. This fact justifies experimenting not only with this particular plan but with any new plan which seems to offer promise of improving the situation. That the plan here proposed offers such hope or promise will be shown in later paragraphs.

2. *The course will compare favorably with the accepted and traditional courses in value and in its contributions to the general education of the individual.* One of the seven commonly accepted objectives of secondary education is "command of fundamental processes." The fundamental processes are ordinarily interpreted as the tools of learning, or the study arts. Such fundamental processes as finding material in the library, making an outline of the main points in a chapter, and preparing a paper or an address are certainly of high value in the daily lives of persons both in school and out and compare favorably in functional value with such activities as translating a foreign language and erecting a perpendicular to a line at a given point. To be good citizens and decide how to vote on public questions or for candidates for offices, we need to be able to listen intelligently and critically to public addresses and to know how to weigh arguments and draw conclusions from what we hear. Surely a course which concerns itself with such fundamental problems as these cannot, if properly taught, be lacking in practical value to the individual and society.

3. *Direct methods of teaching are preferable to indirect methods.* Much good may be accomplished indirectly and incidentally, but more can be accomplished if the effort is applied directly. Some years ago the view was commonly expressed that character could

not be taught directly but must be developed incidentally as an outgrowth of other activities. The recent writings of Charters[1] on this point, however, support the policy of direct instruction. It will be recalled, furthermore, that not many years ago the common view was that teaching ability could not be taught directly and that courses in methods of teaching were unjustified. A direct attack on methods of study would seem to be fully as desirable as a direct attack on methods of teaching.

4. *The different subjects have many study techniques in common which can be taught economically in a single course.* The use of the library is as important in English as in history, and the building of a vocabulary is a process found in connection with all the subjects. Similarly, such activities as memorizing, thinking, acquiring skill, reviewing, and taking examinations are important elements of all subjects. If the how-to-study course confined itself only to these more general study techniques, it would have a large field of usefulness and might be a valuable aid to the teachers of the various subjects. There is much, however, that is peculiar to particular subjects. For example, geometry and literature require radically different study procedures in many respects, and equally great differences exist between other pairs of subjects. If the how-to-study course goes a step beyond the general study principles and takes up the special problems of studying particular subjects, its field of usefulness and service will be greatly increased. It might easily justify itself, however, if it did not attempt the latter type of instruction.

5. *The course places definite responsibility on someone for teaching how to study.* The old saying "everybody's business, nobody's business" is very descriptive of the present situation. The science teacher does not teach pupils how to prepare a bibliography because he is busy teaching science. The history teacher hopes the English teacher will undertake the task, and every teacher of graduate students in a university can testify that large numbers get to the stage of attempting a Master's thesis without ever having had definite training in the preparation of a bibliography. Similar statements could be made with regard to many other study abilities,

[1] W. W. Charters, *The Teaching of Ideals*, p. 183. New York: Macmillan Co., 1927.

which are never taught because they do not fall specifically under any one subject or department. If these abilities are grouped into a single course taught by a special teacher, it is possible to see that all pupils are adequately trained in how to study.

6. *Subject teachers as a group know very little about how to study.* The writer has at various times asked graduate students and experienced teachers to state six ways to study a given subject or to offer six helpful suggestions for the student of a particular subject. The mathematics teacher as a rule cannot offer six study helps for mathematics; nor can the history teacher offer six for history. Many teachers cannot offer even one! Yet these teachers are supervising study and supposedly teaching their pupils how to study! This situation is a large factor in explaining the failure of the present supervised-study plan. If the teachers knew how to study, they might still fail to teach their pupils what they know; but how can they possibly teach what they themselves do not know? The solution of the problem might lie in better training of teachers, but that is a slow process, and in the meantime the pupils urgently need help. As an emergency measure, therefore, if not as a permanent plan, should not the school appoint someone who has some training in educational psychology, the psychology of school subjects, and methods of teaching, and who is willing to read and think intensively about study procedures, and have him give the specialized training in study technique which the subject teachers as a group are not qualified to give?

7. *The course is a means of improving the quality of teaching done by the various subject teachers.* It is an indirect device for the supervision of instruction. The course is a means of imparting new educational ideas and practices to old teachers by the instrumentality of young pupils. Just as immigrant parents are educated and Americanized through their children, so teachers who are violating common principles of educational psychology and methods of teaching may be influenced through the pupils who are in their classes. The doctrines and methods taught in the study course are likely to be discussed occasionally in the various other courses, with profit to pupils and teachers alike. An administrator has reported this fact as his experience in his school, telling the writer that the how-to-

study course stimulates considerable discussion and reading on educational problems throughout the high-school faculty. One large city high school has gone so far as to prepare a course of study in history addressed to the pupils rather than to the teacher, thus sanctioning the principle of teacher improvement through the pupils.

8. *Offering the course will cause us to learn more about how to study and how to teach study habits.* Many a teacher can testify regarding the benefits that have come from teaching a course of which he knew little or nothing. In any course the teacher usually learns more than do the pupils. Our present fund of knowledge about study and learning is not as great as we might wish, but it will grow in proportion as we try to put it to use. If we wait until we have a full-grown science of study before we attempt to teach it, we shall probably wait a long time. If we start to work with what we have, we shall soon have more. Just as the content of the high-school social sciences has been greatly enriched in recent years because of our efforts to teach such courses, so our attempt to teach courses in study technique will help us to discover fundamental principles of study and push back the boundaries of our knowledge of the subject. We should probably not know much about methods of teaching today if the educators of a few decades ago had refused to offer such limited methods courses as they could with the meager body of educational science they possessed at the time.

9. *The offering of how-to-study courses has been tried successfully in both high school and college.* The colleges seem to have originated the practice of teaching regular courses in study technique, and a few objective studies are available showing the results of such attempts as measured by marks earned in college courses.[1] More recently various high schools have adopted the practice and are including such instruction in their requirements. For example, a high school in Pasadena, California, requires the course in the tenth grade, having an enrolment of about 750 pupils in the course each semester, and reports a high degree of satisfaction with the plan. While the plan is comparatively new, it is not by any means an absolutely untried experiment.

[1] For one such study, see C. C. Crawford, "Some Results of Teaching College Students How To Study," *School and Society*, XXIII (April 10, 1926), 471–72.

OBJECTIONS AND DIFFICULTIES RELATED TO THE HOW-TO-STUDY COURSE

Having considered the arguments favorable to a course in the technique of study, let us next examine the factors opposed to such a method of teaching boys and girls how to study. These may be summarized under twelve main headings, as follows:

1. *Method is of small importance, and subject matter is supreme.* The number of those who have little interest in method is fairly large but is fortunately decreasing. There was a time when courses in methods of teaching were regarded as of little or no importance and when the best training for the teaching profession was thought to be training in the subject matter to be taught. The increasing complexity of our civilization, of our educational procedures, and of the study processes which are required for success in school and in life has made training in method more necessary than ever before. Consequently, the view that methods courses are of small importance is destined to give way more and more to the view that the main duty of the school is to teach how to solve new problems and meet new situations rather than to impart information or store the pupils' minds with vast funds of subject matter.

2. *The same methods of study are not good for all pupils.* The opponents of courses in study technique sometimes urge that the differences between pupils are so great that it is impossible to formulate any set of general principles of study that might have universal or even widespread applicability. They hold that each pupil must be allowed to study in his own way and by individual experimentation to work out methods of study which meet his own peculiar needs. The writer does not agree with this view for two reasons. In the first place, he fails to see how it could be true in the field of study technique when it is obviously not true in the fields of teaching technique, research technique, surgical technique, or even swimming technique. General principles have been found for the guidance of beginners in every other field of endeavor, and they may easily be found in the field of intellectual effort as well. In the second place, the writer has experimentally tested this objection with regard to one particular study habit and discovered it to be unfounded. The statement is sometimes made that some types of minds

profit by note-taking and that for other types of minds it is preferable to listen and refrain from taking notes on lectures. Separate individual coefficients of association were computed for 168 college students to determine whether there are two such types of minds, with negative results.[1] The writer is convinced, therefore, that there are study procedures which may be taught to all pupils, or at least to a large majority, and that there are numbers of principles or laws of learning which are of very wide or universal applicability.

3. *The available content for the course is meager and inadequate.* It is said that we have so little to teach regarding study technique that any course which is offered is in danger of being too "thin," or in need of "padding," and that it will not challenge the best talents of the pupils nor hold their respect as do the traditional courses, for which there is an abundance of good material. Those who take this position also state that much of the material that is available is scientifically untested, that it is mere opinion, and that much of it is highly debatable. These same objections are made in the case of practically every new subject that applies for admission to the curriculum. For example, they are raised against the courses in citizenship, economics, and sociology at the present time. The answer to these objections is that we must be prepared to go through a period of adjustment or we shall never have anything new in the curriculum and that the ultimate gain is enough to compensate for the effort during this necessary period of adjustment. There is another point which should be mentioned. Inasmuch as courses in how to study were originated on the college level and inasmuch as several textbooks for use in such courses have been prepared for college Freshmen, we should have no difficulty in offering a course worthy of the respect of high-school pupils. Those who are concerned about this point should use the college textbooks for their high-school how-to-study courses.[2] As time goes on, more and more

[1] Claude C. Crawford, "A Quantitative Study of the Results of Note-taking in College Classes." Unpublished Doctor's thesis, Department of Education, University of Chicago, 1924.

[2] Three of these books are as follows:

a) William F. Book, *Learning How To Study and Work Effectively.* Boston: Ginn & Co., 1926.

b) Claude C. Crawford, *The Technique of Study.* Boston: Houghton Mifflin Co., 1928.

c) Leal A. Headley, *How To Study in College.* New York: Henry Holt & Co., 1926.

books will be published, and the available materials for such a course will greatly increase.

4. *Teaching procedures are not yet well worked out for the course.* Some do not wish to add a new course until they can be assured that it will be well taught, and they fear that a course in how to study will fail through poor teaching. Teachers have not been specially trained to teach such a course, and, at least for the first year, they would be without previous experience in teaching the course. This fact clearly indicates that there must be considerable trial-and-error experimentation while plans and procedures for the course are being perfected and that different schools will discover radically different ways of teaching pupils how to study. This situation will be very irritating to the conservative type of teacher and administrator but will offer a powerful appeal to the educational pioneer, and in the end it will result in our knowing a great deal more about how to teach boys and girls how to study than we know at the present time.

5. *Measurable improvement in study ability is difficult to show as a result of the course.* There are those who wish objective evidence that pupils study more effectively at the end than at the beginning of such a course and who have failed to see positive signs of such improvement in situations where the course has been offered. Two statements may be made in this connection. In the first place, objective studies have been made in a number of cases, and it has been shown that the how-to-study course resulted in a reduction of failures or in higher marks in other subjects. In the second place, even if such studies were not available, or even if they showed no tangible improvement, we might still be justified in offering the course in the hope of accomplishing results which our present crude measuring instruments do not detect. Do we abandon Sunday schools because we cannot measure their effect on the characters of boys and girls? Or do we abandon instruction in citizenship because we have no objective data showing that the instruction makes better citizens? Many of the best fruits of instruction in study habits, as of instruction in citizenship, may appear in indirect form or may be deferred until a period too late for us to get objective measurements of them.

6. *One teacher cannot teach pupils how to study many different*

subjects. We are told that it will take a genius, or even a superhuman being, to teach the study techniques that apply to all high-school subjects. Who will be able to advise pupils about such varied types of study as are involved in mathematics, foreign languages, chemistry, cooking, and art? On the surface this objection seems to present a serious difficulty, and yet we find numerous comparable educational situations which restore our hope and courage. For example, we find teachers who actually teach in four or five different departments or subjects. We find superintendents who transfer teachers from science to French without any doubt that they will succeed in the new work. We find principals and supervisors supervising the work of their entire faculties, including the teaching of every subject in the curriculum. If a principal is competent to give helpful advice to teachers of ten different subjects, may we not hope that somewhere in a high-school faculty a teacher can be found who can give helpful advice and training to pupils studying ten different subjects? Professors of education offer courses to teachers of all the subjects in the curriculum; is there not a possibility of finding someone capable of giving courses to pupils studying all these subjects?

7. *Subject teachers sometimes object to having outsiders give advice to their pupils*. If the how-to-study teacher recommends a study procedure that is directly contrary to the explicit statements of the classroom teacher, there is danger of friction and possible ill will. Pupils are likely to tell their history teacher how their how-to-study teacher advised them to learn dates, for example, and the procedure may be opposite to the method advocated by the teacher of history. Two points may be made in connection with this difficulty. One is that the how-to-study teacher should develop a close working agreement with the other teachers and thus avoid friction through the promotion of a common understanding. The other point is that the benefits of such conflicts of opinions may be fully as great as the dangers. Each difference is a possible stimulus to the discussion of educational problems and thus an avenue to teacher improvement. In fact, many of the items that arouse such debates might well become subjects for more extended discussion in teachers' meetings.

8. *Training given in the course may not carry over into actual practice in other courses.* There is grave danger that the course may be too academic and theoretical. It may easily consist in advice rather than in training and fail to link up with the work in other courses. This statement is just another form of statement for the biggest problem in all education. Every subject in the curriculum is constantly in danger of becoming detached from practical life. The schools are always in danger of becoming too academic and impractical. It is difficult to see that a course in study technique will be any less practical than are some of the subjects now in the curriculum; but, even so, the writer wishes to warn against this greatest of all dangers and to urge that every effort be made to give the course a practical turn. This aim can be accomplished in two ways: (1) by establishing close co-operation with the subject teachers so that they can lend their support and encouragement to movements started in the how-to-study course and (2) by introducing into the course a goodly amount of training, practice, or habit-forming activity to supplement the advice or exhortation which is likely to make up the bulk of the course.

9. *The course may release subject teachers from all responsibility for teaching their pupils how to study.* It is urged that, when one teacher is delegated to teach pupils how to study, the other teachers will abandon all efforts along this line. To what extent this condition is likely to result, it is difficult to say. It is possible that the appointment of a teacher who devotes her major time and attention to study technique might actually create a study consciousness throughout the faculty and increase rather than decrease the sense of responsibility for such training on the part of the various subject teachers. Even if this situation did not result, however, it is difficult to see how much harm could be wrought by such a course in many schools, because of the present apathy and neglect of the study problem on the part of the classroom teachers. In some schools the effort along this line is so small that it could not be reduced appreciably before it would reach the zero point. There is little to lose and much to gain by trying something different from the present unsuccessful practice.

10. *The course will increase school costs through the addition of another teacher.* It is said that a new teacher will add to the total school expense and thus make an immediate financial burden. In reality, however, the more time pupils give to the how-to-study course, the less time they will give to some other course in the present curriculum, and it should be possible to shift a teacher from mathematics, social science, English, or some other subject and thus reduce the cost in some other department at the same time that the cost in the how-to-study department is increased. There is, of course, another point that should be mentioned here, namely, that the reduction in the number of failures and the increased efficiency of school work due to teaching how to study should result in a saving in teachers' salaries that is greater than the cost of supplying the teacher for the special course.

11. *The course will crowd other courses out of the curriculum to some extent.* If each pupil takes a course in study technique, he will naturally have less time to give to some other subject. The how-to-study course therefore tends automatically to crowd other subjects into the background. Whether this crowding-out of other courses is good or bad depends on one's sense of relative values. If the how-to-study course is really worth more than what it crowds out, the substitution is desirable. The writer believes that there are numbers of subjects in the present curriculum which could well be reduced in scope in order to make a place for instruction in the art of study. For example, take the subject of English, which is recognized as absolutely essential and which is almost universally required. The writer, esteeming English very highly, would be willing to substitute for a semester of English a semester of how-to-study instruction and would feel that the pupils were gainers by the substitution.

12. *College-entrance requirements do not recognize the course.* Some opponents of the course feel that the danger of loss of credits on entrance to college is a valid reason for hesitating to offer the course. There are many ways to avoid this danger where it exists. For example, the course in how to study may legitimately be classified as English, or even as psychology, which is ordinarily acceptable as a college-entrance subject. Many colleges actually look with

favor on the study course instead of opposing it, because the colleges led the way in bringing it into existence and consequently are glad to grant credit for such a course when it is taken in the high school. Even in states where colleges do not at present recognize such a new venture, there is good reason to proceed without such recognition because the needs of boys and girls are more important than are the dictates of the colleges and because the colleges are likely to grant the recognition sooner or later. Surely in this age, when the high shools offer courses in everything "from bee-keeping to beauty culture" and "from pipe organ to pipe-fitting," we can find some way to introduce a course which aims to cultivate intellectual efficiency.

HIGH-SCHOOL PUPILS RATE TEACHERS

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The rating of teachers and teaching is a difficult task. Principals and supervisors attempt to set up objectives or standards and rate accordingly. How do pupils who have never thought of teaching except as they have been recipients of the process rate teaching and teachers?

The pupils in the Barberton High School, Barberton, Ohio, were asked to rate their teachers and express judgments on what to them were the characteristics of good and poor teachers.

The following method was used. The superintendent of schools prepared the following directions to be read in the home rooms by pupils selected by the principal.

> I am selected to conduct this exercise this morning because it vitally concerns you and your teachers. You will be given a sheet on which you are to rate your teachers, putting the one you consider best first; the poorest, last. Any opinion you may wish to express will in no way prejudice any teacher against you as the papers will be sent directly from your room to the superintendent's office. You need not sign your name. Remember the Golden Rule. You expect the teachers to be fair with you; be fair with your teachers.

The principal selected a group of pupils consisting of one pupil from each home room, read the instructions to them, and gave them the rating sheets to fill out. After the sheets were filled out, they were collected. Each home-room representative was then given a direction sheet and enough blank rating sheets for the pupils in his room.

The rating sheets or blanks which the pupils filled out read as follows:

> Below are some questions about your teachers which you are asked to answer frankly and honestly. These questions apply only to those teachers in whose classes you have taken work.

1. Rank the teachers whose classes you have attended, putting the one you consider best first; the poorest, last.
2. What qualities, in your judgment, should a good teacher possess?
3. What qualities, in your judgment, make a teacher poor?

Table I shows the weighted averages of the twenty-eight teachers in the school ranked according to the judgments of the pupils.

TABLE I*

RANKING OF TWENTY-EIGHT TEACHERS ACCORDING TO JUDGMENTS OF PUPILS

TEACHER	NUMBER OF PUPILS	RANK											WEIGHTED AVERAGE
		1	2	3	4	5	6	7	8	9	10	11	
1.....	148	103	17	9	11	4	2	1	0	0	0	1	1.74
2.....	178	51	34	30	19	18	17	1	4	2	0	1	3.07
3.....	44	10	14	10	2	3	1	1	0	1	0	2	3.07
4.....	208	56	43	33	19	21	12	11	7	4	0	2	3.29
5.....	192	44	38	37	23	21	11	7	6	3	2	0	3.32
6.....	193	43	35	37	32	15	16	8	2	1	3	1	3.34
7.....	220	40	47	36	38	30	17	6	0	2	1	3	3.40
8.....	215	46	41	45	24	19	20	13	2	1	2	2	3.40
9.....	195	32	42	37	38	21	11	3	8	2	0	1	3.41
10.....	160	32	37	28	22	17	7	6	5	3	2	1	3.41
11.....	200	22	44	40	51	18	15	8	0	0	1	1	3.46
12.....	195	25	39	43	36	21	13	12	2	4	0	0	3.56
13.....	246	43	45	47	40	25	23	14	2	5	0	2	3.57
14.....	194	24	39	37	42	21	18	5	4	0	2	2	3.62
15.....	204	33	33	51	22	26	19	9	8	0	2	1	3.64
16.....	182	25	32	20	46	31	12	8	2	4	0	2	3.79
17.....	287	30	41	61	70	41	12	10	14	5	1	2	3.87
18.....	232	47	34	32	31	27	27	16	10	1	4	3	3.91
19.....	219	28	37	27	45	33	20	14	7	5	0	3	4.02
20.....	166	24	16	35	24	26	18	11	5	5	1	1	4.08
21.....	82	7	16	8	20	13	8	2	5	1	1	1	4.15
22.....	94	7	18	13	21	12	7	7	3	2	1	3	4.28
23.....	184	39	25	19	19	22	22	15	2	9	5	7	4.31
24.....	151	23	14	17	22	33	14	10	9	3	3	3	4.44
25.....	213	18	31	29	26	38	36	15	4	8	3	5	4.56
26.....	191	12	20	22	33	24	27	22	15	5	6	5	5.06
27.....	215	5	20	22	41	35	32	28	17	9	3	3	5.20
28.....	200	6	13	29	25	29	27	30	16	8	9	8	5.57

* This table should be read as follows: Of the 148 pupils who ranked Teacher 1, 103 ranked him 1; 17 ranked him 2; 9 ranked him 3; etc.

The ranking by the pupils is more specific than the ranking which was made earlier by the superintendent and the principal. The numerical differences in some cases are very small. The general rankings of the teachers are, however, so much like those which were given by the superintendent and the principal that it is evident that the pupils were accurate in their judgments.

The replies to the second question ("What qualities, in your judgment, should a good teacher possess?") may by summarized as follows. The numbers in parentheses show the frequencies of the qualities that were listed more than twenty times.

1. Good disposition, kindness, patience, cheerfulness, controls temper (226)
2. Impartial (183)
3. Ability to explain clearly (132)
4. Discipline (122)
5. Knowledge of subject (78)
6. Fair in marking (73)
7. Sense of humor (61)
8. Helps pupils out of class (60)
9. Understands high-school boys and girls (52)
10. Knows how to interest pupils (43)
11. Honest in all her dealings; keeps her word (35)
12. Good judgment (30)
13. Good personality (29)
14. Has school spirit (27)
15. Clear and definite in assignments (26)
16. Distinguishes between important and unimportant
17. Will-power
18. Leadership
19. Never laughs at pupils' mistakes
20. Makes no use of detention rooms
21. Possesses abundant general knowledge as well as knowledge of her subject
22. Does not get off subject
23. Good voice
24. Knows the ability of class
25. Able to give good advice
26. Appreciates whatever weaknesses pupils may possess
27. Uses good English
28. Supervises study, allows study periods
29. Understands home conditions
30. Gives frequent tests
31. Practices the Golden Rule
32. Ventilates room
33. Dresses conservatively
34. Co-operates
35. Is a good sport

The replies to the third question ("What qualities, in your judgment, make a teacher poor?") may be summarized as follows:

1. Partiality (164)
2. Unpleasant disposition, quick temper, etc. (148)
3. Lack of discipline (85)
4. Poor explanation (56)
5. Lack of knowledge (48)
6. Lack of humor (39)
7. Indefinite assignments (29)
8. Talks too much (26)
9. Nags pupils (21)
10. Too strict
11. Faultfinding
12. Does not take care of own discipline problems
13. Poor English
14. Poor voice
15. Does not recognize effort
16. Dogmatic
17. Lacks school spirit
18. Always preaches about something
19. Does not keep on lesson
20. Calls attention of class to difference between bright and dull pupils
21. Too many tests
22. Does not allow study periods
23. Thinks poor marks make a pupil study
24. Rules with a hickory stick
25. Stays out too late at night
26. Inflated with self-importance
27. Always brings up past errors

Some of the answers were highly personal, but, since the replies were anonymous and only four of the nine hundred papers showed personal venom, one is convinced that the high-school boys and girls were sincere.

The following statements made by the pupils may be quoted.

Poor teacher—A swell head, bulldog bark, bum pronunciation of words, overbearing manner, marks low out of mere spite, marks on conduct and agreement with his views on debatable subjects.

A good teacher should possess personality; he should be a good example for the pupils; he should know what he is talking about and be able to explain the necessary points satisfactorily. He should endure some whispering or talking, for we are human, not machines.

A poor teacher does not have a pleasing personality. A teacher may have a good education but may not be able to explain a point in the language of the pupils. A poor teacher desires that we should do everything perfectly, but we are only human. A poor teacher also marks according to her pupil likes and dislikes.

A poor teacher possesses these qualities: (1) thinks more of other things than of school work, (2) has no interest in pupils, and (3) just lets work go along any way at the beginning but at the end gives the pupil so much work that he cannot do it and do it right.

The teachers were told that, if they were interested in looking over the results of the pupils' rating, they could do so. Several with the lowest ratings accepted the verdict and began to look for positions elsewhere.

The answers to Questions 2 and 3 were given to the various home-room teachers to read and tabulate. The teachers were interested in these answers because they realized that all the qualities of good or poor teachers listed by the pupils were qualities of members of the teaching staff. Some of them took a different attitude toward the whole school situation.

The writer believes that, while these high-school pupils did not make a contribution to pedagogical literature, they did give their teachers an opportunity to read the most practical, poignant, vital, pedagogical information they had ever read.

TRENDS IN SPACE PROVISIONS IN PLANS FOR HIGH-SCHOOL BUILDINGS

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With the steadily increasing high-school enrolment of the past twenty years has come an increasing demand for more and better buildings. Changes in organization and curriculums have necessitated changes and additions in buildings. The purpose of the study here reported was to show by data collected from the three periods centering about the years 1907, 1917, and 1927 changes and trends in space provisions in plans for high-school buildings over a period of twenty years. Such a study may be of some practical value in connection with high-school building problems by showing objectively changes that have taken place from period to period and by indicating trends in space provisions.

All the building plans used in the study were published in the *American School Board Journal* from 1905 to 1928. Those for the first period appeared in the volumes for 1905–10; those for the second period, in the volumes for 1916–18; and those for the third period, in the volumes for 1926–28. Not all the plans published were included. In some instances the plans were incomplete, too small, or badly blurred. It seemed desirable also, for purposes of comparison, to select a certain number of plans—twenty-four—for each period.

The cities involved are widely enough scattered to be fairly representative of the country as a whole. The distribution is as follows: North Central states, 26; Eastern states, 19; Southern states, 15; Western states, 6; New England states, 6.

The distribution of the twenty-four plans for each period according to the number of floors shown is presented in Table I. Buildings having three floors are decidedly in the majority. The number of buildings having four floors increased slightly in the second period but decreased very decidedly in the third period.

In each set of plans the different kinds of space provisions, exclusive of boiler rooms, coal rooms, fan rooms, etc., were carefully listed and checked. The data thus secured were tabulated to show the frequency with which each kind of space provision occurred. The frequencies were then reduced to percentages to indicate the relative importance of the various space provisions. Care has been taken to reproduce the exact term used to designate each space provision, and each has been tabulated as a separate provision wherever even a slight difference in use was indicated.

TABLE I

DISTRIBUTION OF THE TWENTY-FOUR PLANS FOR EACH PERIOD ACCORDING TO THE NUMBER OF FLOORS SHOWN

NUMBER OF FLOORS	PERIODS			TOTAL
	1907	1917	1927	
1	0	1	0	1
2	0	2	3	5
3	15	11	16	42
4	8	10	4	22
5	1	0	1	2
Total	24	24	24	72

The total number of space provisions found is 376. These are grouped for subsequent consideration in eight divisions: classrooms, science rooms, library, auditorium, and study rooms; home economics and commercial rooms; shops; physical-education rooms; health and comfort rooms; offices; supply and store rooms; and miscellaneous rooms.

Of the 376 kinds of space provisions, three were found in 91–100 per cent of the plans; three, in 81–90 per cent; three, in 71–80 per cent; three, in 61–70 per cent; and eight, in 51–60 per cent. Thus, only twenty kinds of space provisions were found in more than 50 per cent of the plans. If the minimum essentials in space provisions are those which were found in more than 50 per cent of the plans, as suggested by Koos,[1] the modern high school should provide at least for classrooms, boys' and girls' toilet rooms, auditorium with

[1] Leonard V. Koos, "Space-Provisions in the Floor-Plans of Modern High-School Buildings," *School Review*, XXVII (October, 1919), 593.

stage and dressing rooms, library, study halls, two science laboratories with lecture room, sewing and domestic-science rooms, typewriting and bookkeeping rooms, general storage room, boys' and girls' locker rooms, gymnasium, and principal's office. These are the provisions which were found in more than 50 per cent of the plans for the entire twenty-year period.

A comparison of the number of kinds of space provisions decade by decade shows a slight increase in 1917 over 1907 and a more decided increase in 1927 over 1917. In 1907 there were 161 kinds of space provisions; in 1917, 185; and in 1927, 250. The data show a trend toward a greater variety of space provisions, to meet, no doubt, the growing demand for an enriched curriculum and a more comprehensive secondary-school program.

In order to indicate the degree of change in principal space provisions as a whole that has taken place, correlations were computed for 1907 and 1917, 1917 and 1927, and 1907 and 1927. Then, as a check on the validity of the data, two correlations were made with the data of Koos's study of 156 building plans from the *American School Board Journal* for the ten-year period from 1907 to 1917.[1] Obviously, there should be a high correlation between the space provisions found by Koos and the space provisions in 1907 and 1917 found in the present study. All correlations are based on the percentages of the forty-seven principal space provisions which were found in 15 per cent or more of the plans studied by Koos.

The correlation of the percentages for 1907 and 1917 is $.754 \pm .043$; of the percentages for 1917 and 1927, $.727 \pm .047$. The lower correlation for 1917 and 1927 indicates that the changes in principal space provisions during the second ten-year period were somewhat greater than those during the first ten-year period. Some marked changes in the second period occurred in such space provisions as principal's office, general storage room, cooking room, waiting room, domestic-science room, and men teachers' room. The correlation of the percentages for 1907 and 1927 is only $.604 \pm .062$.

A correlation of $.888 \pm .021$ was found between the space provisions in the building plans studied by Koos and the space provisions in the plans included in this study for 1907 and 1917. The percent-

[1] *Ibid.*, pp. 573–99.

ages for the forty-seven provisions in Koos's list were paired with the averages of the percentages for 1907 and 1917 found in this study. Obviously, there should be a high correlation between the two sets of data covering approximately the same period of time, and a coefficient of .888 is an indication of the reliability of the data secured in either or both of the studies.

A comparison of Koos's data with the 1927 data of this study resulted in a very low correlation, $.108 \pm .099$. Some striking contrasts appeared, such as the following: typewriting room, 29 per cent in the Koos data and 92 per cent in the 1927 data; bookkeeping room, 18 per cent and 92 per cent; sewing room, 39 per cent and 83 per cent; and domestic-science room, 35 per cent and 75 per cent. The low correlation indicates the high degree of change that has taken place in space provisions during the twenty-year period from 1907 to 1927.

CLASSROOMS, SCIENCE ROOMS, LIBRARY, AUDITORIUM, AND STUDY ROOMS

Classrooms, sometimes designated as recitation rooms, were found in 97.2 per cent of all the plans. The two plans in which standardized classrooms were not found—one for 1907 and one for 1917—were for buildings located in large cities, and all rooms were designated as subject rooms, such as English, Latin, typewriting, and wood-turning. A stage or platform, usually in connection with the auditorium but sometimes in the assembly hall or gymnasium, was found in 84.7 per cent of the plans—70.8 per cent for 1907 and 91.7 per cent for both 1917 and 1927. An auditorium was found in 70.8 per cent of the plans for 1907 and in 87.5 per cent of the plans for both 1917 and 1927. In several instances assembly rooms and gymnasiums were evidently used for auditorium purposes. The undesirability of this combination is expressed by Strayer and Engelhardt in the statement that the auditorium should be separate from the gymnasium and is not intended as spectator space for athletic games.[1]

The chemistry laboratory heads the list of subject rooms with a percentage of 81.9. The percentage rose from 79.2 in 1907 to

[1] G. D. Strayer and N. L. Engelhardt, *Standards for High School Buildings*, p. 64. New York: Teachers College, Columbia University, 1924.

91.7 in 1917 but dropped to 75.0 in 1927. The chemistry laboratory has tended to give way in recent years to the general-science laboratory and a combination laboratory for physics and chemistry, the percentage of the former rising from 0.0 in 1907 and 1917 to 20.8 in 1927 and of the latter from 0.0 in 1907 to 4.2 in 1917 and 8.3 in 1927. The same trend appeared in the case of the separate physics laboratory, botany laboratory, and science lecture room. The percentages of physics laboratories were 66.7 in 1907, 87.5 in 1917, and 66.7 in 1927; the percentages of botany laboratories were 4.2 in 1907, 25.0 in 1917, and 16.7 in 1927; and the percentages of science lecture rooms were 62.5 in 1907, 87.5 in 1917, and 66.7 in 1927. Donovan stated in 1921 that botany and zoölogy were giving way in many schools to applied or more generalized sciences.[1] The percentage of biology laboratories rose from 33.3 in 1907 and 1917 to 45.8 in 1927. Provision for a dark room was made in 50.0 per cent of the plans in 1907, 25.0 per cent in 1917, and 33.3 per cent in 1927. The general-science laboratory, geography room, greenhouse, botany workroom, and science demonstration room were found only in the plans for 1927, while the dairy laboratory, electrical laboratory, mineralogical laboratory, and combination laboratory for zoölogy and physics were found only in the plans for 1917.

Little change is evident in library provisions, the percentages being 75.0 in 1907, 83.3 in 1917, and 79.2 in 1927. Three new library provisions were found, however, in 1927, namely, library study, library classroom, and library workroom, with percentages of 4.2, 8.3, and 20.8, respectively. Provision for study halls showed little change from 1907 to 1917, decreasing from 66.7 per cent in 1907 to 62.5 per cent in 1917 but increasing to 79.2 per cent in 1927.

Table II shows the number and percentage of plans in each period containing each of the twelve principal space provisions for classrooms, science rooms, library, auditorium, and study rooms.

HOME ECONOMICS AND COMMERCIAL ROOMS

The space provisions for home economics and commercial rooms showed a decided upward trend for the entire twenty-year period.

[1] John J. Donovan, *School Architecture: Principles and Practices*, p. 390. New York: Macmillan Co., 1921.

The sewing room showed an increase from 33.3 per cent in 1907 to 70.8 per cent in 1917 and 83.3 per cent in 1927; the typewriting room, from 8.3 per cent to 66.7 per cent and 91.7 per cent; the domestic-science room, from 33.3 per cent to 45.8 per cent and 75.0 per cent; the bookkeeping room, from 8.3 per cent to 54.2 per cent and 91.7 per cent; the kitchen, from 12.5 per cent to 37.5 per cent and 70.8 per cent; the stenography room, from 0.0 per cent to 41.7 per cent and 54.2 per cent; the fitting room, from 4.2 per cent to

TABLE II

NUMBER AND PERCENTAGE OF PLANS IN EACH PERIOD CONTAINING EACH OF THE TWELVE PRINCIPAL SPACE PROVISIONS FOR CLASSROOMS, SCIENCE ROOMS, LIBRARY, AUDITORIUM, AND STUDY ROOMS

SPACE PROVISION	PERIODS						TOTAL	
	1907		1917		1927			
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Classrooms	23	95.8	23	95.8	24	100.0	70	97.2
Stage or platform	17	70.8	22	91.7	22	91.7	61	84.7
Auditorium	17	70.8	21	87.5	21	87.5	59	81.9
Chemistry laboratory	19	79.2	22	91.7	18	75.0	59	81.9
Library	18	75.0	20	83.3	19	79.2	57	79.2
Physics laboratory	16	66.7	21	87.5	16	66.7	53	73.6
Science lecture room	15	62.5	21	87.5	16	66.7	52	72.2
Study hall	16	66.7	15	62.5	19	79.2	50	69.4
Dressing room (auditorium)	14	58.3	13	54.2	10	41.7	37	51.4
Biology laboratory	8	33.3	8	33.3	11	45.8	27	37.5
Dark room	12	50.0	6	25.0	8	33.3	26	36.1
Art room	2	8.3	12	50.0	5	20.8	19	26.4

37.5 per cent and 50.0 per cent. Table III shows the number and percentage of plans in each period containing each of the twelve most important space provisions for home economics and commercial rooms.

The dining room has been replaced largely by the cafeteria, which was not found in the plans for 1907 and 1917 but was found in 41.7 per cent of the plans for 1927. Donovan is authority for the statement that "the best arrangement . . . . is the cafeteria, or, as it might be termed, the self-serving lunchroom."[1] The cooking room, with percentages of 20.8 and 45.8 in 1907 and 1917, respectively, gave way entirely in 1927 to the domestic-science and foods labora-

[1] *Ibid.*, p. 513.

tory. Separate lunchrooms for boys and girls were found in the plans for 1917 only, with a percentage of 20.8.

The general commercial room showed a decrease from 37.5 per cent in 1917 to 12.5 per cent in 1927, whereas, as already pointed out, the special typewriting, stenography, and bookkeeping rooms showed marked increases.

TABLE III

NUMBER AND PERCENTAGE OF PLANS IN EACH PERIOD CONTAINING EACH OF THE TWELVE PRINCIPAL SPACE PROVISIONS FOR HOME ECONOMICS AND COMMERCIAL ROOMS

SPACE PROVISION	PERIODS						TOTAL	
	1907		1917		1927			
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Sewing room	8	33.3	17	70.8	20	83.3	45	62.5
Typewriting room	2	8.3	16	66.7	22	91.7	40	55.6
Domestic-science room	8	33.3	11	45.8	18	75.0	37	51.4
Bookkeeping room	2	8.3	13	54.2	22	91.7	37	51.4
Dining room	6	25.0	16	66.7	10	41.7	32	44.4
Kitchen	3	12.5	9	37.5	17	70.8	29	40.3
Pantry	7	29.2	12	50.0	9	37.5	28	38.9
Stenography room	0	0.0	10	41.7	13	54.2	23	31.9
Fitting room	1	4.2	9	37.5	12	50.0	22	30.6
Lunchroom	5	20.8	5	20.8	9	37.5	19	26.4
Cooking room	5	20.8	11	45.8	0	0.0	16	22.2
Banking room	2	8.3	7	29.2	5	20.8	14	19.4

SHOPS

Shopwork has clearly maintained its place throughout the twenty-year period, although it did not show the marked increase made by home economics and commercial work. The mechanical-drawing room heads the list with a total percentage of 40.3—29.2 per cent in 1907, 37.5 per cent in 1917, and 54.2 per cent in 1927. The manual-training room, although second in the list, with a total percentage of 36.1, showed a decrease from 50.0 per cent in 1907 to 25.0 per cent in 1917 and 33.3 per cent in 1927. The percentages for the other principal provisions are as follows: finishing room, 12.5 per cent in 1907, 16.7 per cent in 1917, and 37.5 per cent in 1927; lumber room, 16.7 per cent in 1907, 16.7 per cent in 1917, and 25.0 per cent in 1927; forge shop, 20.8 per cent in 1907, 20.8 per cent in

1917, and 16.7 per cent in 1927; woodworking room, 20.8 per cent in 1907, 8.3 per cent in 1917, and 25.0 per cent in 1927; machine shop, 4.2 per cent in 1907, 29.2 per cent in 1917, and 20.8 per cent in 1927; tool room, 12.5 per cent in 1907, 12.5 per cent in 1917, and 12.5 per cent in 1927; foundry, 4.2 per cent in 1907, 16.7 per cent in 1917, and 4.2 per cent in 1927; blueprint room, 4.2 per cent in 1907, 8.3 per cent in 1917, and 12.5 per cent in 1927; wood-turning shop, 12.5 per cent in 1907, 12.5 per cent in 1917, and 0.0 per cent in 1927; bench room, 0.0 per cent in 1907, 25 per cent in 1917, and

TABLE IV

NUMBER AND PERCENTAGE OF PLANS IN EACH PERIOD CONTAINING EACH OF THE TWELVE PRINCIPAL SPACE PROVISIONS FOR SHOPS

SPACE PROVISION	PERIODS						TOTAL	
	1907		1917		1927			
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Mechanical-drawing room	7	29.2	9	37.5	13	54.2	29	40.3
Manual-training room	12	50.0	6	25.0	8	33.3	26	36.1
Finishing room	3	12.5	4	16.7	9	37.5	16	22.2
Lumber room	4	16.7	4	16.7	6	25.0	14	19.4
Forge shop	5	20.8	5	20.8	4	16.7	14	19.4
Woodworking room	5	20.8	2	8.3	6	25.0	13	18.1
Machine shop	1	4.2	7	29.2	5	20.8	13	18.1
Tool room	3	12.5	3	12.5	3	12.5	9	12.5
Foundry	1	4.2	4	16.7	1	4.2	6	8.3
Blueprint room	1	4.2	2	8.3	3	12.5	6	8.3
Wood-turning shop	3	12.5	3	12.5	0	0.0	6	8.3
Bench room	0	0.0	6	25.0	0	0.0	6	8.3

0.0 per cent in 1927. Table IV shows the number and percentage of plans in each period containing each of the twelve principal space provisions for shops.

The data presented in Table IV show that space provisions for shopwork have not changed decidedly during the last ten years. The finishing room showed an increase from 16.7 per cent in 1917 to 37.5 per cent in 1927; the lumber room, from 16.7 per cent in 1917 to 25.0 per cent in 1927; the woodworking room, from 8.3 per cent in 1917 to 25.0 per cent in 1927. The percentages for the other principal space provisions remained approximately the same or showed decreases in 1927.

A trend in keeping with changing vocational objectives is apparent in the space provisions for shops. Provision for manual training as a general vocational subject showed a decrease from 50.0 per cent in 1907 to 25.0 per cent in 1917 and 33.3 per cent in 1927; whereas space was provided in the 1927 period for more specialized types of work, such as mechanical drawing, woodworking, machine shop, sheet-metal work, printing, electrical work, and auto-mechanics. There is a growing conviction that vocational offerings in the high-school curriculum should deal with specific types of work and should be made as practical as possible.[1]

The fact that, on the whole, there has been no decided increase in the number of space provisions for shops during the past ten years may be due in part to the expense of equipment and to mounting school costs.

PHYSICAL-EDUCATION ROOMS

Only four types of space provisions for physical education were found in more than 30 per cent of the plans. The gymnasium heads the list, with a total percentage of 58.3. The percentages for the three periods—1907, 1917, and 1927—are 50.0, 75.0, and 50.0, respectively. In 1927 the general gymnasium was replaced by separate gymnasiums for boys and girls, which were found in 25.0 per cent of the plans.

Boys' and girls' locker rooms were found in 37.5 per cent of the plans in 1907, 62.5 per cent in 1917, and 62.5 per cent in 1927; boys' shower room, 25.0 per cent in 1907, 37.5 per cent in 1917, and 45.8 per cent in 1927; girls' shower room, 20.8 per cent in 1907, 29.2 per cent in 1917, and 37.5 per cent in 1927; girls' locker and shower room, 0.0 per cent in 1907, 8.3 per cent in 1917, and 29.2 per cent in 1927; boys' gymnasium, 4.2 per cent in 1907, 8.3 per cent in 1917, and 25.0 per cent in 1927; girls' gymnasium, 0.0 per cent in 1907, 8.3 per cent in 1917, and 25.0 per cent in 1927; physical directors' room, 0.0 per cent in 1907, 25.0 per cent in 1917, and 8.3 per cent in 1927; boys' locker and shower room, 0.0 per cent in 1907, 8.3 per cent in 1917, and 25.0 per cent in 1927; room for girls' physical director, 0.0 per cent in 1907, 8.3 per cent in 1917, and 25.0 per cent

[1] Alexander Inglis, *Principles of Secondary Education*, p. 604. Boston: Houghton Mifflin Co., 1918.

in 1927; locker room, 8.3 per cent in 1907, 20.8 per cent in 1917, and 0.0 per cent in 1927; swimming pool, 0.0 per cent in 1907, 12.5 per cent in 1917, and 12.5 per cent in 1927. Table V shows the number and percentage of plans in each period containing each of the twelve principal space provisions for physical-education rooms.

Two distinct trends appear in the data presented. One is the increase in the number and kinds of space provisions for physical

TABLE V

NUMBER AND PERCENTAGE OF PLANS IN EACH PERIOD CONTAINING EACH OF THE TWELVE PRINCIPAL SPACE PROVISIONS FOR PHYSICAL-EDUCATION ROOMS

SPACE PROVISION	PERIODS						TOTAL	
	1907		1917		1927			
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Gymnasium	12	50.0	18	75.0	12	50.0	42	58.3
Boys' and girls' locker rooms	9	37.5	15	62.5	15	62.5	39	54.2
Boys' shower room	6	25.0	9	37.5	11	45.8	26	36.1
Girls' shower room	5	20.8	7	29.2	9	37.5	21	29.2
Girls' locker and shower room	0	0.0	2	8.3	7	29.2	9	12.5
Boys' gymnasium	1	4.2	2	8.3	6	25.0	9	12.5
Girls' gymnasium	0	0.0	2	8.3	6	25.0	8	11.1
Physical directors' room	0	0.0	6	25.0	2	8.3	8	11.1
Boys' locker and shower room	0	0.0	2	8.3	6	25.0	8	11.1
Room for girls' physical director	0	0.0	2	8.3	6	25.0	8	11.1
Locker room	2	8.3	5	20.8	0	0.0	7	9.7
Swimming pool	0	0.0	3	12.5	3	12.5	6	8.3

education since 1907. The other trend is the increase in the number of separate gymnasiums, locker rooms, and shower rooms for boys and girls.

The swimming pool, evidently, is not considered a necessary part of physical-education equipment. It was found in only six of the seventy-two plans—three in 1917 and three in 1927.

Several provisions found among those for physical education suggest the prominence of interscholastic athletics in the modern program of physical education and emphasize the importance of competitive games as an essential part of such a program.

HEALTH AND COMFORT ROOMS

Boys' and girls' toilet rooms lead among the provisions for health and comfort rooms, with total percentages of 93.1—91.7 per cent in 1907, 87.5 per cent in 1917, and 100.0 per cent in 1927. Three plans for 1907 and five plans for 1917 used the term "toilet room" without specifying separate rooms for boys and girls. All plans in 1927, however, specified separate rooms. The teachers' room is second in rank, with a total percentage of 43.1—33.3 per cent in 1907, 66.7 per cent in 1917, and 29.2 per cent in 1927. The low percentage for this provision in 1927 is accounted for by the increase in separate rooms for women teachers and men teachers. The percentages of rooms for women teachers were 16.7 in 1907, 16.7 in 1917, and 58.3 in 1927; for men teachers, 4.2 in 1907, 12.5 in 1917, and 50.0 in 1927.

Percentages for other principal provisions are as follows: rest room, 12.5 in 1907, 12.5 in 1917, and 29.2 in 1927; girls' rest room, 8.3 in 1907, 12.5 in 1917, and 16.7 in 1927; toilet room, 12.5 in 1907, 20.8 in 1917, and 0.0 in 1927; clinic room, 0.0 in 1907, 0.0 in 1917, and 29.2 in 1927; infirmary, 8.3 in 1907, 12.5 in 1917, and 0.0 in 1927; nurse's room, 0.0 in 1907, 0.0 in 1917, and 16.7 in 1927; boys' rest room, 4.2 in 1907, 8.3 in 1917, and 4.2 in 1927; women's toilet room, 8.3 in 1907, 0.0 in 1917, and 8.3 in 1927.

The highest percentage for health provisions is 9.7 for the clinic room. "In general, the facilities provided in schools in the past have been too few rather than too many for the health program."[1]

The increase in provisions for health and comfort rooms in 1927 over 1917 is the most significant change shown in these data. The women teachers' room showed an increase from 16.7 per cent to 58.3 per cent; the men teachers' room, from 12.5 per cent to 50.0 per cent; the rest room, from 12.5 per cent to 29.2 per cent. There is an indication also of the growing importance of health education in the fact that each of the ten new provisions which were found in 1927 was a health provision.

Table VI shows the number and percentage of plans in each period containing each of the twelve principal space provisions for health and comfort rooms.

[1] G. D. Strayer and N. L. Engelhardt, *op. cit.*, p. 70.

OFFICES

In office facilities only three provisions were found in 25 per cent or more of the plans. The principal's office was found in 70.8 per cent of the plans; superintendent's office, 43.1 per cent; general office, 25.0 per cent; principal's private office, 18.1 per cent; instructors' offices, 16.7 per cent; board room, 13.9 per cent; public office, 11.1 per cent; office, 11.1 per cent; manual-training office, 9.7 per cent; stenographer's office (superintendent), 6.9 per cent; assistant principal's office, 5.6 per cent; and clerk's office, 5.6 per cent.

TABLE VI

NUMBER AND PERCENTAGE OF PLANS IN EACH PERIOD CONTAINING EACH OF THE TWELVE PRINCIPAL SPACE PROVISIONS FOR HEALTH AND COMFORT ROOMS

SPACE PROVISION	PERIODS						TOTAL	
	1907		1917		1927			
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Boys' and girls' toilet rooms	22	91.7	21	87.5	24	100.0	67	93.1
Teachers' room	8	33.3	16	66.7	7	29.2	31	43.1
Women teachers' room	4	16.7	4	16.7	14	58.3	22	30.6
Men teachers' room	1	4.2	3	12.5	12	50.0	16	22.2
Rest room	3	12.5	3	12.5	7	29.2	13	18.1
Girls' rest room	2	8.3	3	12.5	4	16.7	9	12.5
Toilet room	3	12.5	5	20.8	0	0.0	8	11.1
Clinic room	0	0.0	0	0.0	7	29.2	7	9.7
Infirmary	2	8.3	3	12.5	0	0.0	5	6.9
Nurse's room	0	0.0	0	0.0	4	16.7	4	5.6
Boys' rest room	1	4.2	2	8.3	1	4.2	4	5.6
Women's toilet room	2	8.3	0	0.0	2	8.3	4	5.6

The principal's office was provided in 70.8 per cent of the plans in 1907, 54.2 per cent in 1917, and 87.5 per cent in 1927. The superintendent's office was provided in 70.8 per cent of the plans in 1907 but in only 25.0 per cent of the plans in 1917 and 33.3 per cent in 1927. The board room showed a distinct decrease—20.8 per cent in 1907, 8.3 per cent in 1917, and 12.5 per cent in 1927. In all probability, these data reflect the tendency in recent years to exalt the high-school principalship, making the principal the general manager of his school, directly responsible for its organization, administration, and supervision.[1]

[1] Alexander Crippen Roberts and Edgar Marian Draper, *The High-School Principal as Administrator, Supervisor, and Director of Extracurricular Activities*, p. 61. Boston: D. C. Heath & Co., 1927.

The assistant principal's office was found in 1917 in one building and in 1927 in three buildings. A large number of miscellaneous offices were found but once or twice. As pointed out in the study made by Woellner and Reavis,[1] there is a strong recent trend toward provision for office suites rather than a single office. Table VII shows the number and percentage of plans in each period containing each of the twelve principal space provisions for offices.

TABLE VII

NUMBER AND PERCENTAGE OF PLANS IN EACH PERIOD CONTAINING EACH OF THE TWELVE PRINCIPAL SPACE PROVISIONS FOR OFFICES

SPACE PROVISION	PERIODS						TOTAL	
	1907		1917		1927			
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Principal's office	17	70.8	13	54.2	21	87.5	51	70.8
Superintendent's office	17	70.8	6	25.0	8	33.3	31	43.1
General office	3	12.5	4	16.7	11	45.8	18	25.0
Principal's private office	2	8.3	7	29.2	4	16.7	13	18.1
Instructors' offices	0	0.0	6	25.0	6	25.0	12	16.7
Board room	5	20.8	2	8.3	3	12.5	10	13.9
Public office	0	0.0	6	25.0	2	8.3	8	11.1
Office	0	0.0	8	33.3	0	0.0	8	11.1
Manual-training office	4	16.7	0	0.0	3	12.5	7	9.7
Stenographer's office (superintendent)	2	8.3	0	0.0	3	12.5	5	6.9
Assistant principal's office	0	0.0	1	4.2	3	12.5	4	5.6
Clerk's office	1	4.2	0	0.0	3	12.5	4	5.6

SUPPLY AND STORE ROOMS

Space provisions for general storage were found in 58.3 per cent of the plans—58.3 per cent in 1907, 79.2 per cent in 1917, and 37.5 per cent in 1927. The large decrease in 1927 was caused by the provision for storerooms for specific purposes, such as kitchen supply room and sewing storeroom, rather than for general storage. The percentages for all other supply- and store-room provisions are much lower. The store and apparatus room (gymnasium) was found in 0.0 per cent of the plans in 1907, 12.5 per cent in 1917, and 37.5 per cent in 1927; science-apparatus room, 25.0 per cent in 1907, 20.8 per cent in 1917, and 0.0 per cent in 1927; general supply room,

[1] Robert Woellner and W. C. Reavis, "Architectural Plans of Administrative Offices in Secondary Schools," *School Review*, XXXVII (January, 1929), 41.

16.7 per cent in 1907, 20.8 per cent in 1917, and 0.0 per cent in 1927; kitchen supply room, 8.3 per cent in 1907, 8.3 per cent in 1917, and 20.8 per cent in 1927; sewing storeroom, 0.0 per cent in 1907, 0.0 per cent in 1917, and 29.2 per cent in 1927; physics storeroom, 12.5 per cent in 1907, 0.0 per cent in 1917, and 12.5 per cent in 1927; book and supply room, 0.0 per cent in 1907, 0.0 per cent in 1917, and 25.0 per cent in 1927; shops storage room, 20.8 per cent in 1907, 0.0 per cent in 1917, and 4.2 per cent in 1927; stock room, 0.0 per cent in 1907, 25.0 per cent in 1917, and 0.0 per cent in 1927; book

TABLE VIII

NUMBER AND PERCENTAGE OF PLANS IN EACH PERIOD CONTAINING EACH OF THE TWELVE PRINCIPAL SPACE PROVISIONS FOR SUPPLY AND STORE ROOMS

SPACE PROVISION	PERIODS						TOTAL	
	1907		1917		1927			
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
General storage	14	58.3	19	79.2	9	37.5	42	58.3
Store and apparatus room (gymnasium)	0	0.0	3	12.5	9	37.5	12	16.7
Science-apparatus room	6	25.0	5	20.8	0	0.0	11	15.3
General supply room	4	16.7	5	20.8	0	0.0	9	12.5
Kitchen supply room	2	8.3	2	8.3	5	20.8	9	12.5
Sewing storeroom	0	0.0	0	0.0	7	29.2	7	9.7
Physics storeroom	3	12.5	0	0.0	3	12.5	6	8.3
Book and supply room	0	0.0	0	0.0	6	25.0	6	8.3
Shops storage room	5	20.8	0	0.0	1	4.2	6	8.3
Stock room	0	0.0	6	25.0	0	0.0	6	8.3
Book storage room	0	0.0	0	0.0	5	20.8	5	6.9
Science supply room	0	0.0	5	20.8	0	0.0	5	6.9

storage room, 0.0 per cent in 1907, 0.0 per cent in 1917, and 20.8 per cent in 1927; science supply room, 0.0 per cent in 1907, 20.8 per cent in 1917, and 0.0 per cent in 1927.

Table VIII shows the number and percentage of plans in each period containing each of the twelve principal space provisions for supply and store rooms.

MISCELLANEOUS PROVISIONS

The miscellaneous group contains sixty-eight provisions, thirty-eight, or more than one-half of which, were found but once, while ten others were found but twice. Almost every imaginable type of

provision seems to have found its way into at least one set of plans. Museum, rifle range, solarium, memorial hall, gridiron, radio room, trophy room, and roof garden are a few interesting provisions selected at random from the list. The percentages for the entire group are low. Only four provisions—janitor's room, vault, wardrobe, and reception room—were found in more than 25 per cent of the plans.

The percentages for the first twelve provisions are as follows: janitor's room, 25.0 per cent in 1907, 54.2 per cent in 1917, and 58.3 per cent in 1927; vault, 29.2 per cent in 1907, 33.3 per cent in 1917, and 62.5 per cent in 1927; wardrobe, 41.7 per cent in 1907, 25.0 per cent in 1917, and 16.7 per cent in 1927; reception room, 41.7 per cent in 1907, 20.8 per cent in 1917, and 16.7 per cent in 1927; picture booth, 0.0 per cent in 1907, 12.5 per cent in 1917, and 54.2 per cent in 1927; waiting room, 4.2 per cent in 1907, 12.5 per cent in 1917, and 41.7 per cent in 1927; club room, 16.7 per cent in 1907, 8.3 per cent in 1917, and 4.2 per cent in 1927; book room, 0.0 per cent in 1907, 25.0 per cent in 1917, and 0.0 per cent in 1927; bicycle room, 8.3 per cent in 1907, 12.5 per cent in 1917, and 0.0 per cent in 1927; elevator, 4.2 per cent in 1907, 4.2 per cent in 1917, and 12.5 per cent in 1927; workroom, 12.5 per cent in 1907, 8.3 per cent in 1917, and 0.0 per cent in 1927; faculty dining room, 4.2 per cent in 1907, 0.0 per cent in 1917, and 12.5 per cent in 1927.

The first two provisions—janitor's room and vault—showed steady gains, the former increasing from 25.0 per cent in 1907 to 54.2 per cent in 1917 and 58.3 per cent in 1927 and the latter from 29.2 per cent in 1907 to 33.3 per cent in 1917 and 62.5 per cent in 1927. The picture booth and the waiting room showed marked gains in 1927, the former increasing from 12.5 per cent in 1917 to 54.2 per cent in 1927 and the latter from 12.5 per cent in 1917 to 41.7 per cent in 1927. The wardrobe and the reception room showed losses, the former decreasing from 41.7 per cent in 1907 to 25.0 per cent in 1917 and 16.7 per cent in 1927 and the latter from 41.7 per cent in 1907 to 20.8 per cent in 1917 and 16.7 per cent in 1927.

Table IX shows the number and percentage of plans in each period containing each of the first twelve miscellaneous space provisions. The data show a trend toward increased provision for janitor's room, vault, picture booth, and waiting room and a trend

toward decreased provision for wardrobe, reception room, and club room.

SUMMARY AND CONCLUSIONS

This study of the building plans of seventy-two representative high schools for the three periods 1907, 1917, and 1927 reveals a distinct trend toward a greater variety of space provisions in building construction. This trend is evidenced by the fact that 161 different kinds of space provisions were found in 1907, 185 in 1917, and

TABLE IX

NUMBER AND PERCENTAGE OF PLANS IN EACH PERIOD CONTAINING EACH OF THE TWELVE PRINCIPAL MISCELLANEOUS SPACE PROVISIONS

SPACE PROVISION	PERIODS						TOTAL	
	1907		1917		1927			
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Janitor's room	6	25.0	13	54.2	14	58.3	33	45.8
Vault	7	29.2	8	33.3	15	62.5	30	41.7
Wardrobe	10	41.7	6	25.0	4	16.7	20	27.8
Reception room	10	41.7	5	20.8	4	16.7	19	26.4
Picture booth	0	0.0	3	12.5	13	54.2	16	22.2
Waiting room	1	4.2	3	12.5	10	41.7	14	19.4
Club room	4	16.7	2	8.3	1	4.2	7	9.7
Book room	0	0.0	6	25.0	0	0.0	6	8.3
Bicycle room	2	8.3	3	12.5	0	0.0	5	6.9
Elevator	1	4.2	1	4.2	3	12.5	5	6.9
Workroom	3	12.5	2	8.3	0	0.0	5	6.9
Faculty dining room	1	4.2	0	0.0	3	12.5	4	5.6

250 in 1927. The large increase in 1927 suggests the degree of expansion and enrichment that has characterized the secondary-school program during the past ten years.

A comparison of Koos's data with the data for 1907 and 1917 in this study, covering approximately the same decade, showed a correlation of $.888 \pm .021$. This high correlation indicates the reliability of the data secured in either or both of the studies for the period from 1907 to 1917.

The facts revealed in the study and analysis of the various kinds of space provisions justify the following conclusions.

1. The most significant development revealed in the study of classrooms, science rooms, library, auditorium, and study rooms is

a trend away from separate laboratories for the specialized science subjects. This trend indicates a growing preference for science work of a general nature rather than the intensive study of separate, highly specialized fields.

2. A remarkable increase was found in provisions for home economics and commercial work. Without exception, the provisions showed marked increases for both 1917 and 1927. It is evident, therefore, that home economics and commercial work have established for themselves permanent places in the high-school curriculum.

3. Space provisions for shops indicate a trend toward specific types of work of a more practical nature, such as mechanical drawing, woodworking, machine shop, sheet-metal work, printing, electrical work, and auto-mechanics. This trend is in keeping with the growing conviction that vocational offerings in the high school should be as specific and practical as possible. The amount of provision for shops showed little change in the past ten years.

4. About 70 per cent of the plans showed space provisions for physical education. Separate locker and shower rooms and separate gymnasiums for boys and girls showed increases in 1917 and 1927. Provisions in 1927 for corrective gymnasium work and for intramural and interscholastic athletics showed a trend toward an expanded and more comprehensive program of physical education and emphasized the importance of competitive games as an essential part of such a program.

5. Separate rest rooms for men and women teachers and for boys and girls were provided most frequently in the plans for 1927. This fact indicates increasing attention to the comfort and convenience of both teachers and pupils. Such provisions as nurse's room, clinic room, medical dressing room, and infirmary show the growing recognition of the importance of health education. Ten new provisions, which were found in the plans for 1927 only, were health provisions.

6. The plans for high-school buildings in 1927 provided more adequate office facilities than did the plans for either 1907 or 1917. The general office, assistant principal's office, clerk's office, medical office, dean's office, and instructors' offices were provided most fre-

quently in 1927. The superintendent's office, however, showed a decided decrease, probably because of the changing status of the principalship, the tendency being to make the principal more fully responsible for the control and management of his school. The plans for 1927 indicated a distinct trend toward the provision of a general office suite in place of a single office. The plans included such provisions as general office, public office, clerk's office, assistant principal's office, medical examiner's office, and dean's office.

7. The provisions for general storage rooms showed a decrease from 1917 to 1927. Rooms for specific kinds of stores and supplies were provided instead, such as store and apparatus room for gymnasium, kitchen supply room, sewing storeroom, physics storeroom, book storage room, art storeroom, and music storeroom. Changes in classroom methods and materials, which mark the passing of the conventional recitation, and the development of an enriched curriculum necessitate specific space provision for the various kinds of supplies and materials used in the different types of work.

8. Among the miscellaneous provisions, the janitor's room, fireproof vault, motion-picture booth, and waiting room showed upward trends in 1927. The largest increases were found in the case of the motion-picture booth and the waiting room. The great variety of provisions found in the plans for 1927, such as club room, conference room, armory, store, museum, rifle range, band room, and auditorium practice room, indicated the growing diversity of the offerings of the modern secondary-school curriculum and the diversity of local interests and needs.

WHAT PART DOES THE SCHOOL PLAY IN THE FORMATION OF THE READING HABITS OF ITS PUPILS?

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The part played by the school in the formation of the reading habits of its pupils is a question concerning which there are many opinions. Opinions on this question, as on other questions, are based on personal experiences, but, as opinions go, they are seldom well founded. In seeking answers to this question and a number of others, the writer undertook a study[1] with the hope of securing some definite information. The inquiry dealt with the consumption of current literature by pupils in the junior and senior high school grades and the avenues through which it comes to their attention.

The study of current literature was thought defensible since it constitutes an important part of the material read in everyday life. "In the United States and Canada 20,474 weekly and monthly magazines are published."[2] The yearly circulation of these magazines runs into the billions. These magazines are a part of the child's environment inasmuch as they are displayed by news dealers, drug stores, and other agencies. As one views the quantity of current literature on display, one is forced to ask: How are the millions of young people being trained to select the good from the bad? What is the part played by the school in this training?

In order that the study might include a sufficient number of pupils so that the findings would have a high degree of reliability, two communities were selected. The two communities adjoined each other and had populations of 14,000 and 22,000, respectively. The living conditions and the industries in the two communities were similar.

On a given day at a given hour, each child above the sixth grade in each town who was in school was given a sheet of paper on which

[1] Frank D. Henderson, "The Voluntary Reading of 2,083 Junior and Senior High School Pupils." Unpublished Master's thesis, University of Washington, 1927.

[2] "Newspapers and Other Periodicals," *American Newspaper Annual and Directory*, p. 13. Philadelphia: N. W. Ayer & Son, 1929.

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were printed nine questions. The pupils were told to answer these questions. At the top and also at the bottom of the paper were instructions to the pupil not to write his name on the paper. The pupils were told that, since their names were not on the papers, no one would know who had answered the questions on a given paper. The time required to answer the questions was in the majority of cases less than three minutes.

The papers were collected by the principal of each school and sent to the office of the superintendent. They were distributed as to grade and sex and then separated into junior and senior high school groups. There were papers from 2,086 pupils—637 junior high school boys, 337 senior high school boys, 694 junior high school girls, and 418 senior high school girls. The answers to the questions were tabulated.

The ninth question in the list and the one with which this article is concerned was, "Who asks you to read magazines?" The replies of the junior and senior high school boys appear in Table I and the replies of the junior and senior high school girls, in Table II. If two agencies were named as asking the pupil to read magazines, both were listed so that each might receive credit.

Tables I and II show that, of the 2,086 pupils concerned in this study, only 448 were asked to read magazines by their teachers. The remaining 1,638 pupils, 571 of them in the senior high school, were not asked to read magazines by their teachers. Seventy-six per cent of the senior high school pupils concerned in this study were not being trained by the school for the current reading of everyday life. Of the 1,331 junior high school pupils, 264 were asked to read magazines by their teachers; 1,067 pupils, or 80 per cent, were not. Of the total number of pupils concerned in this study, 1,638 were not being trained by the school for the current reading of everyday life, and 1,007 of these pupils were not being guided in their magazine reading by anyone.

There may be some who doubt that pupils in the junior high school grades have an acquaintance with magazines. On this point there is definite evidence. In naming the magazines they preferred, the junior high school girls listed 106 different magazines; the junior high school boys, 104; the senior high school girls, 72; the senior high school boys, 62; and all pupils combined, 162.

CONCLUSIONS

In view of the facts presented, it seems reasonable to conclude that no agency in the communities studied had assumed the task of introducing the pupils of high-school age to the better class of current literature. There is no reason to reject the idea that they are typical communities. In this respect, then, the schools are failing to measure up to the present objectives of education. Alexander Inglis said: "Whenever any other social institution fails to provide

TABLE I

REPLIES OF 637 JUNIOR HIGH SCHOOL BOYS AND 337 SENIOR HIGH SCHOOL BOYS TO THE QUESTION "WHO ASKS YOU TO READ MAGAZINES?"

	Junior High School Boys	Senior High School Boys
No one	312	200
Family	186	49
Teacher	117	84
Friends	35	9
Aunt	4	0
Scoutmaster	4	0
Agent	1	1
Uncle	1	0
Guardian	1	0
Y.M.C.A.	0	1

TABLE II

REPLIES OF 694 JUNIOR HIGH SCHOOL GIRLS AND 418 SENIOR HIGH SCHOOL GIRLS TO THE QUESTION "WHO ASKS YOU TO READ MAGAZINES?"

	Junior High School Girls	Senior High School Girls
No one	255	240
Family	231	83
Teacher	147	100
Friends	63	13
Aunt	7	0
Cousin	6	0
Grandmother	3	0
Camp Fire guardian	3	1
Scout leader	1	0
Uncle	1	0
Sunday school	1	0
Guardian	0	1

forms of education socially desirable, the school should assume responsibility for those forms of education as far as may be possible."[1]

The conditions revealed in this study would seem to indicate that it is the duty of the school to devise ways and means of introducing pupils to the better things in current literature. Such an introduction would aid the pupils in developing those desirable reading interests which are the very foundation of a well-rounded life and which are neglected by the home. Surely pupils have a right to become acquainted with the better magazines, some of which have stood the tests of time for the last half-century.

All the resources that the teacher has—prestige, enthusiasm, and technique—should be brought to bear on the work of "recommending" the better magazines. Better than a study of the results of literary criticism might be the practice of literary criticism. Might this not be a project that would teach both pupil and teacher what both need to know?

It would provide the pupil who is soon to leave school with at least an introduction to some of the better magazines. It would also give the pupil who remains in school the beginning of an interest that could broaden indefinitely as he progresses in knowledge of life. Elementary criteria could be provided by which even the young could discriminate to some extent between the good and the bad.

That there is a definite need for some form of training by the schools in the matter of current literature, no one can dispute in view of the tremendous amount of current literature consumed. Chas. Dana said: "The total circulation of story magazines in the United States and Canada is 625 million copies per year."[2] Surely the magnitude of this number should cause thoughtful teachers to lend their aid in helping the youthful readers find their way.

As we view our news stands today laden with literature of varying degrees of excellence, it is well for us to remember that the literature is there to supply a demand. We must also bear in mind the fact that the consumers of this literature are now or were at one time pupils in our schools.

[1] Alexander Inglis, *Principles of Secondary Education*, p. 341. Boston: Houghton Mifflin Co., 1918.

[2] Chas. Dana, "Now that Everybody Has Enough To Read, What Should Libraries Do?" *Library* (Newark, New Jersey, Public Library), III (November, 1928), 3.

THE STATUS OF EQUIPMENT IN ATHLETIC, HEALTH, AND PHYSICAL-EDUCATION DEPARTMENTS OF ONE HUNDRED HIGH SCHOOLS IN THE UNITED STATES

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In the spring of 1929 a survey was made of the athletic, health, and physical-education departments of one hundred high schools in the United States. The purpose of this study was to determine the status of these departments with respect to equipment. Both indoor equipment and outdoor equipment were considered.

The data for the study were secured by means of an extensive questionnaire. The information was supplied in most cases by the athletic director of the school. No effort was made to discriminate between junior and senior high schools. The enrolments of the high schools range from one thousand to five thousand. In all, twenty-seven states are represented.

An examination of the questionnaires returned indicated that, in general, they had been filled out with care. All the reports were examined and obvious errors were corrected or otherwise eliminated before the tabulation was undertaken. The tabulations were checked, and it is reasonably certain that relatively few errors were introduced through this phase of the work. However, the questions were general in certain respects, and it cannot be said that the information is entirely reliable.

The percentages of high schools which reported having certain types of outdoor equipment are shown in Table I. It appears from the data presented that an athletic field is considered standard equipment. Separate outdoor space for girls is apparently not so considered. This fact seems to indicate that outdoor activities for girls are not given as much attention as are such activities for boys. This conclusion is further supported by the fact that 63 per cent of the schools do not have space for such games as volley ball and fist-ball.

Data with regard to the number and size of the various types of outdoor equipment are presented in Table II. The average size of the athletic fields (8.8 acres) seems sufficient to insure ample space for the student body. It is significant that one suburban high school reported an athletic field of thirty-two acres, while nine schools reported fields of twenty or more acres. In most cases the unusually large fields were reported by schools having well-organized

TABLE I

PERCENTAGE OF HIGH SCHOOLS WHICH HAVE EACH OF FOUR TYPES OF OUTDOOR EQUIPMENT

Type of Equipment	Percentage of Schools Which Have Equipment	Percentage of Schools Which Do Not Have Equipment
Athletic field	81	19
Separate outdoor space for girls*	33	58
Tennis courts*	48	49
Courts for volley ball, fistball, etc.*	33	63

* Data not complete.

TABLE II

DATA WITH REGARD TO SIZE OF ATHLETIC FIELDS, SIZE OF OUTDOOR SPACES FOR GIRLS, AND NUMBER OF TENNIS COURTS FOR BOYS AND GIRLS

	Range	Average
Size of athletic field in acres*	1–32	8.80
Size of outdoor space for girls in acres	½–5	2.45
Number of tennis courts for boys	1–6	2.58
Number of tennis courts for girls	1–6	2.46

* For boys or girls.

programs of outdoor activities for the pupils. The average size of the outdoor space for the girls (2.45 acres) seems to indicate that in high schools where such space is provided, the girls are not suffering from limited space. If tennis courts are to be considered as necessary equipment, the number reported for both girls and boys appears to be far from adequate for the number of pupils in the schools.

The percentages of high schools which reported having certain types of indoor equipment are shown in Tables III and IV. The

tendency to supply adequate indoor equipment is encouraging. Especially noteworthy are the provisions made for girls' activities. Separate accommodations for girls in indoor equipment are provided by 54 per cent of the schools, while such provisions in outdoor equipment are made by but 33 per cent of the schools. Since 96 per

TABLE III

PERCENTAGE OF HIGH SCHOOLS WHICH HAVE EACH OF SIX TYPES OF INDOOR EQUIPMENT

Type of Equipment	Percentage of Schools Which Have Equipment	Percentage of Schools Which Do Not Have Equipment
Gymnasiums	96	4
Separate accommodations for girls*	54	34
Boys share gymnasiums with girls*	44	51
Teachers' recreation rooms*	8	87
Indoor track*	38	59
Swimming pool*	42	55

* Data not complete.

TABLE IV

PERCENTAGE OF HIGH SCHOOLS WHICH HAVE EACH OF NINE TYPES OF SPECIAL INDOOR EQUIPMENT

Type of Equipment	Percentage of Schools
Director's office	86
Separate offices for man and woman directors	76
Room or office for each instructor	32
Examination room or rooms	47
Storage-room for equipment	97
Drying-room for equipment	33
Dressing room or rooms	48
Athletic team rooms	52
Visitors' gallery	71

cent of the schools have gymnasiums, it is evident that such equipment is considered standard.

It is not the present practice among the schools studied to provide teachers' recreation rooms. It is difficult to explain this condition unless it is because those responsible for the planning of the buildings have not recognized the value of keeping the teachers fit. It seems worth noting that such costly equipment as a swimming pool is maintained by 42 per cent of the schools.

The tendency in the high schools studied, as indicated in Table IV, is to provide such equipment as a director's office, separate offices for man and woman directors, a storage-room for equipment, and a visitors' gallery.

Information was obtained as to the number and size of the gymnasiums and the seating capacity of the visitors' galleries. This information is summarized in Table V. The number of high schools reporting gymnasiums in connection with the school plant seems to indicate little need for further emphasis along this line. One large city high school reported six regular gymnasiums in addition to two

TABLE V

DATA WITH REGARD TO NUMBER AND SIZE OF GYMNASIUMS AND SEATING CAPACITY OF VISITORS' GALLERIES

	Range	Average
Number of regular gymnasiums*	1–6	1.50
Number of special gymnasiums*	1–3	1.37
Number of regular gymnasiums for girls	1–2	1.06
Number of special gymnasiums for girls	1–2	1.18
Size of regular gymnasiums in feet	28×80–70×190	60×90
Size of special gymnasiums in feet	16×32–75×175	40×60
Size of regular gymnasiums for girls in feet	15×40–80×80	50×70
Size of special gymnasiums for girls in feet	16×32–50×90	20×40
Seating capacity of visitors' galleries	150–4,000	1,072

* May be for boys alone or for boys and girls.

special gymnasiums. It is significant that the average number of both regular and special gymnasiums is more than one.

The average sizes of all types of gymnasiums seem generous. One school reported a regular gymnasium 70 feet by 190 feet, while another school reported a special gymnasium 75 feet by 175 feet.

The data received concerning locker-rooms and shower-bath equipment are shown in Table VI. It is evident from these data that locker-rooms and showers are considered standard equipment. It will be noted that, while 93 per cent of the schools have locker-rooms, 19 per cent have no means of ventilation for the lockers. The high schools studied apparently have not considered a laundry a necessary part of their equipment.

The schools were asked to indicate the means of refiltration and disinfection used in connection with the swimming pools. The

means used and the number of schools using each are shown in Table VII. Chlorine, or chlorine in one of its forms, is favored.

The percentages of high schools which reported having certain types of health service rooms are shown in Table VIII. Apparently,

TABLE VI

DATA WITH REGARD TO LOCKER-ROOMS AND SHOWER-BATH EQUIPMENT

Type of Equipment	Percentage of Schools Which Have Equipment	Percentage of Schools Which Do Not Have Equipment
Locker-rooms	93	7
Means of ventilation for lockers*	69	19
Showers	95	5
Boys' type of shower for girls*	10	76
Towels and uniforms laundered by school*	40	58
School laundry*	8	89

* Data not complete.

TABLE VII

NUMBER OF HIGH SCHOOLS WHICH USE EACH OF ELEVEN MEANS OF REFILTRATION AND DISINFECTION OF WATER IN SWIMMING POOLS

	Number of High Schools
Chlorine	20
Filter	9
Violet ray	4
Chlorinated lime	3
Gravel and chlorozene	1
Alum and sand	1
Bichloride	1
Chlorine bubble	1
Chloro-clock machine	1
Ozone	1
Vacuum	1

the nurse's room is the only type considered as standard equipment by the schools studied.

The schools were questioned concerning the equipping of certain teams. It was thought that the data secured would shed some light on the attitude of school officers toward furnishing uniforms for the

athletic teams. The percentages of high schools which reported completely equipping, partly equipping, and not equipping various athletic teams are shown in Table IX. The present tendency of the high schools studied is to equip the football, basket-ball, and track teams completely. Baseball teams, apparently, are not recognized to the same degree.

TABLE VIII

PERCENTAGE OF HIGH SCHOOLS WHICH HAVE EACH OF FIVE TYPES OF HEALTH SERVICE ROOMS

Type of Room	Percentage of Schools Which Have Room	Percentage of Schools Which Do Not Have Room
Nurse's room*	70	25
Waiting-room*	53	42
Dressing-rooms*	42	48
Medical clinic*	52	42
Dental clinic*	32	58

* Data not complete.

TABLE IX

PERCENTAGE DISTRIBUTION OF HIGH SCHOOLS ACCORDING TO EXTENT TO WHICH THEY EQUIP EACH OF FOUR TYPES OF ATHLETIC TEAMS

	Percentage of Schools Which Completely Equip Teams	Percentage of Schools Which Partly Equip Teams	Percentage of Schools Which Do Not Equip Teams
Football teams*	80	17	2
Basket-ball teams*	81	16	1
Baseball teams*	52	16	14
Track teams*	75	16	7

* Data not complete.

In conclusion, it might be said that the present conditions concerning athletic, health, and physical-education equipment are not deplorable. At the same time, they cannot be considered satisfactory. It appears that considerable improvement must be made before the equipment of the high schools studied measures up to the standards set by authorities in this field.

A COMPARISON OF TWO METHODS OF TEACHING ONE PROBLEM IN GENERAL SCIENCE

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Many different types of classroom procedures have been introduced in recent years, each of which, as claimed by its sponsor, will overcome many of the ills of the old traditional class recitation. In a recent book entitled *The Passing of the Recitation*,[1] Thayer has condemned the old method as unsound because it is based on educational principles which are not in keeping with present educational philosophy.

The principal weaknesses of the traditional class recitation, according to various writers, are (1) monopolization of class activity by a few; (2) lack of co-operation between teacher and pupils; (3) a distorted sense of responsibility felt alike by pupils and teacher; (4) inadequate training in initiative, originality, expression, and judgment; (5) low level of interest and attention; (6) tendency toward formalism; and (7) verbalism.

A number of experiments have been conducted by various classroom teachers to determine the effectiveness of different methods of teaching in various high-school subjects. Some have been conducted under the most satisfactory conditions for obtaining reliable results. Only when control and experimental groups have been selected carefully is one justified in drawing definite conclusions regarding the effectiveness of any particular method or procedure.

In order to compare the assignment-recitation plan with the unit plan as described by Morrison,[2] four classes in general science in the Queen Anne High School, Seattle, were selected for study. The problem was to test these two methods in one specific phase of work. The textbook used was *Elements of General Science* by Caldwell and

[1] V. T. Thayer, *The Passing of the Recitation*, p. 14. Boston: D. C. Heath & Co., 1928.

[2] Henry C. Morrison, *The Practice of Teaching in the Secondary School*, chap. vi. Chicago: University of Chicago Press, 1926.

Eikenberry. *Everyday Problems in Science* by Pieper and Beauchamp was used to supplement this textbook. The latter book is organized in units according to the Morrison plan of mastery technique, and the problem selected is from Unit XIII. The steam engine was the specific topic studied.

The apparatus and materials used in connection with the experiment were one cutaway model of the working parts of a locomotive, one toy steam engine, one slide of a cross-section of a steam chest, and a projection machine.

The four classes in general science were of about the same average intelligence. As the instructor had been carrying on a more detailed

TABLE I

AVERAGE NUMBER OF ERRORS MADE BY THE PUPILS IN EACH CLASS ON PIEPER AND BEAUCHAMP'S FACTUAL TEST ON UNIT XIII, FORM B

Class	Number of Pupils	Number of Questions per Pupil	Total Number of Errors	Average Number of Errors	Variation of Average Number of Errors from Total
1*	18	40	207	11.50	−0.71
2	24	40	318	13.25	1.04
3	25	40	281	11.24	−0.97
4*	19	40	244	12.84	0.63
Total	86	.....	1,050	12.21	.....

* Taught by the Morrison plan.

study with the same classes, an earlier matching of the pupils had been made. In order to determine the amount of information regarding steam engines possessed by the pupils, all classes were given a pretest of fifty items. This was Form B of the factual test on Unit XIII devised by Pieper and Beauchamp. This test contains questions referring to gas engines as well as steam engines, but only the questions relating to steam engines were used in this study. The average number of errors made by the pupils in each of the four classes is shown in Table I.

If the data for Classes 1 and 4 and Classes 2 and 3 are combined and averages for the two larger groups calculated, the two groups are shown to have had approximately the same previous information on the subject. The group taught by the Morrison plan made an

average of 12.19 errors on the pretest, while the assignment-recitation group made an average of 12.22 errors, or .03 more errors per pupil than the other group.

Classes 1 and 4 had been taught by the unit procedure for three months, while Classes 2 and 3 had followed the assignment-recitation plan. Neither group, therefore, was subjected to a method that was different from that to which it was accustomed in general science. The pupils represented in Table I are those who took the three tests given and who were present in class for the two parts of the experiment.

After the pretest, Classes 1 and 4 started work on the unit entitled "Using Steam and Exploding Gas." Nothing was done or said that would indicate that the pupils would be given a special test on the steam engine. They worked out individually the three following exercises relating to the steam engine.

1. How does a toy steam engine work? Examine a toy steam engine carefully. Turn on the air and study the operation of the engine. [The latter was done as a class demonstration.]

2. Make a drawing of the steam engine like that shown in Figure 367, or the model on the demonstration table, but with the piston at the opposite end of the cylinder. Show the position of the slide valve and the direction of the steam through the engine.

3. You have probably heard about engineers "reversing" their engines to prevent running into other trains. What does the engineer do, and why does this slow the train?

All these exercises were started in one period, and, although not all the pupils had finished them, a special test was given ten minutes before the end of the period.

The class period for Class 2 was distributed as follows: pretest and reading assignment, 20 minutes; demonstration of the toy steam engine and questions and answers regarding the working parts of the steam chest, 20 minutes; immediate test (same as that given to Classes 1 and 4), 10 minutes. The procedure for Class 3 was identical in every respect with that for Class 2. The results of the immediate test in the four classes are shown in Table II.

Nothing was said concerning the test that would lead the pupils to believe that anything other than regular classroom procedure was being followed. One month later all four classes were given the same test as a memory test. The results of this test, which are shown

in Table III, were to indicate whether or not one method was superior to the other in fixing facts.

Table III shows that the pupils in all classes combined made two fewer errors on the memory test than on the immediate test. All classes but Class 1 made more errors on the memory test than on the

TABLE II

AVERAGE NUMBER OF ERRORS MADE BY THE PUPILS IN EACH CLASS ON IMMEDIATE TEST ON THE STEAM ENGINE

Class	Number of Pupils	Number of Questions per Pupil	Total Number of Errors	Average Number of Errors	Variation of Average Number of Errors from Total
1*	18	20	68	3.78	−0.42
2	24	20	118	4.92	0.72
3	25	20	90	3.60	−0.60
4*	19	20	85	4.48	0.28
Total	86	.....	361	4.20	.....

* Taught by the Morrison plan.

TABLE III

AVERAGE NUMBER OF ERRORS MADE BY THE PUPILS IN EACH CLASS ON THE MEMORY TEST ON THE STEAM ENGINE

Class	Number of Pupils	Number of Questions per Pupil	Total Number of Errors	Average Number of Errors	Variation of Average Number of Errors from Total	Gain or Loss in Total Number of Errors as Compared with Immediate Test
1*	18	20	59	3.28	−0.89	−9
2	24	20	123	5.13	0.96	5
3	25	20	91	3.64	−0.53	1
4*	19	20	86	4.53	0.36	1
Total	86	.....	359	4.17	.....	−2

* Taught by the Morrison plan.

immediate test, but in two cases there is a difference of only one error. Class 1 made nine fewer errors on the memory test than on the immediate test. The group taught by the Morrison plan made eight fewer errors, or an average decrease of .22 of an error per pupil, while the assignment-recitation group made six more errors, or an average increase of .12 of an error per pupil.

Table IV shows the average number of errors per pupil made by the two major groups on each of the three tests.

Table V shows the distribution of pupils in each class according to the number of errors made in the immediate test and in the memory test. An examination of this table shows that there is very little difference between the results of the immediate test and the

TABLE IV

AVERAGE NUMBER OF ERRORS MADE BY THE TWO MAJOR GROUPS ON THE PRETEST, IMMEDIATE TEST, AND MEMORY TEST

Group	Number of Pupils	Pretest	Immediate Test	Memory Test	Gain or Loss in Average Number of Errors
Morrison plan	37	12.19	4.14	3.92	−0.22
Assignment-recitation plan	49	12.22	4.24	4.37	0.13

TABLE V

DISTRIBUTION OF THE PUPILS IN EACH CLASS ACCORDING TO THE NUMBER OF ERRORS MADE ON THE IMMEDIATE TEST AND THE MEMORY TEST

	Number of Errors														Range in Number of Errors	Mean Number of Errors
	0	1	2	3	4	5	6	7	8	9	10	11	12	13		
Class 1:*																
Immediate test	...	1	6	2	4	1	2	1	...	1	...	...	...	...	1–9	3.5
Memory test	...	4	2	6	3	...	2	...	...	1	...	...	...	...	1–9	3
Class 2:																
Immediate test	1	...	2	2	6	4	5	3	...	...	...	...	...	1	0–13	5
Memory test	...	1	2	3	7	1	2	3	3	1	...	1	...	...	1–11	4
Class 3:																
Immediate test	...	2	2	9	7	2	1	1	1	...	...	...	...	...	1–8	3
Memory test	...	2	4	6	8	...	4	1	...	...	...	...	...	...	1–7	4
Class 4:*																
Immediate test	...	3	3	3	2	1	3	2	...	...	1	...	1	...	1–12	4
Memory test	...	1	2	6	2	3	2	1	1	...	...	...	...	1	1–13	4
All classes:																
Immediate test	1	6	13	16	19	8	11	7	1	1	1	...	1	1	0–13	4
Memory test	...	8	10	21	20	4	10	5	4	2	...	1	...	1	1–13	4

* Taught by the Morrison plan.

results of the memory test in the case of all classes combined. The ranges in number of errors are practically identical, and the mean number of errors is the same. In Class 1 the range for the immediate test is the same as the range for the memory test; in Classes 2 and 3 the range is less for the memory test than for the immediate test; in Class 4 the range is greater for the memory test. This particular

analysis of results tends to show that the assignment-recitation method was more effective in fixing facts than was the Morrison plan.

While the experiment was not conducted as scientifically as the investigator desired, it was carried out under everyday classroom conditions; therefore, it is believed that certain tendencies are shown by the results of the study.

1. Although the average number of errors per class ranges from 11.24 to 13.25 on the pretest, the average for the group taught by the Morrison plan is 12.19 and for the assignment-recitation group, 12.22. Since there is a difference of only .03 of an error per pupil, one might assume that the two major groups were evenly matched in the matter of previous knowledge.

2. The group taught by the Morrison plan made a slightly better record on the immediate test than did the assignment-recitation group, but the difference between the two groups is so slight that no superiority can be claimed for one method over the other in initial learning. The average number of errors made by the group taught by the Morrison plan is 4.14; the average for the assignment-recitation group is 4.24.

3. The group taught by the Morrison plan made a better showing on the memory test than did the assignment-recitation group. On the average, the former group made fewer errors on the memory test than on the immediate test, while the latter group made more errors on the memory test than on the immediate test. These facts tend to show that the Morrison plan was more effective in fixing facts than was the assignment-recitation plan.

4. The range in number of errors made by the assignment-recitation group is smaller in the case of the memory test than in the case of the immediate test. The range in number of errors made by the group taught by the Morrison plan is greater in the case of the memory test than in the case of the immediate test. These facts tend to show that the assignment-recitation procedure was more effective in fixing facts than was the Morrison plan.

5. The results of the investigation tend to show that neither method of teaching studied is distinctly superior to the other. The determining factor is the teacher, not the method or device.

Educational Writings

REVIEWS AND BOOK NOTES

A comprehensive treatise on organizing and administering the college.—Most of the books of recent publication in the field of higher education, unless they are symposiums of multiple authorship, deal with single aspects of the whole problem—for example, the philosophy of the college, size of class at the college level, the agencies of control, the curriculum, or finance. Less often do they undertake to deal, as does the book[1] by Floyd W. Reeves and John Dale Russell, with something approaching the full scope of college administration. The book opens with an introductory chapter devoted to a history and general description of the institutions the surveys of which constitute the foundation on which the principles of organization and administration are erected. This is followed by chapters on the scope of service of higher educational institutions; their control, organization, and internal administration; the physical plant; the program of studies; the distribution of marks and objective and comprehensive examinations; problems relating to students; teaching loads; and faculties. There is a group of six chapters dealing with problems of finance, namely, accounting and budgetary procedure, costs, effective use of resources, sources of revenue, scholarship and loan funds, and economic factors affecting the support of higher institutions. The concluding chapter reviews the "present status" of the institutions represented, emphasizing recent improvements, many of which were effected after the surveys were made. There is also a well-made index.

According to statements in the Preface, the authors present the book as one "devoted to the principles of college organization and administration." It is their belief that the formulation of these principles is a "natural outgrowth of the making of college surveys. Principles of administration, at first derived empirically, can through the medium of a considerable number of surveys be tested out in actual conditions, results can be compared and contrasted, and a sort of experimental proof obtained through the observation of the operation of the suggested modifications which are made in the light of the tentatively derived principles of organization and administration" (pp. 4–5). The data drawn upon in the book are largely from the surveys of sixteen colleges and universities affiliated with the Board of Education of Disciples of Christ.

[1] Floyd W. Reeves and John Dale Russell, *College Organization and Administration:* A Report Based upon a Series of Surveys of Church Colleges. Indianapolis, Indiana: Board of Education of Disciples of Christ, 1929. Pp. 324. $2.50.

However, the content benefits from the experiences of the authors in surveys of a total of some sixty different institutions. A codification of principles established in such large-scale investigation should unquestionably be superior to one having nothing more than an experiential foundation, which is the foundation that has to date largely determined the practices in higher institutions.

The book teems with lines of inquiry and methods of investigation in higher education. Most of these will be found directly applicable in higher institutions other than those represented. When the investigator applies them, he will have at hand within the book data for illuminating comparisons. Moreover, the comparisons already afforded are interesting and valuable on their own account. The manner of writing is simple and direct; there is no verbiage. In fact, one leaves the reading of the book with the feeling that the treatment is compact and that the sources would have made possible—perhaps even desirable—a much larger volume. Both the content and the manner of presenting it should help in raising the organization and administration of colleges to a level of greater efficiency.

LEONARD V. KOOS

A survey of the literature in higher education.—Although the history of research with respect to higher education extends back only about ten years, an extraordinarily large number of published investigations have already resulted. These investigations have been very diverse in nature and have been reported in widely scattered publications; hence, a survey of the whole field of research in higher education should be of great value to both the student of education and the worker in the field. A recent book[1] undertakes to effect such a survey and accomplishes its purpose with distinctive merit and thoroughness.

The purpose of the book is to record the progress which has been made in reorganization and adjustment in higher education. To this end, the author has made a thorough survey of the material which has been published during the last ten years. By way of orientation, the author devotes the first chapter to a consideration of the sources of the literature which the book purports to survey. Some idea of the extensiveness of the survey may be gathered from the fact that the author has consulted the reports of about two thousand authors. By way of providing further orientation for the reader, the second chapter gives a brief survey of the present status of colleges, teachers, and students.

Having thus provided the reader with a sort of background as to the field of higher education, the author surveys the field in a systematic way in the remaining six chapters. The following important problems are considered: objectives and standards, curriculum, psychology of learning, instruction, measurement, and guidance. The last chapter is concerned with recent attempts to

[1] Carter V. Good, *Teaching in College and University:* A Survey of the Problems and Literature in Higher Education. Baltimore: Warwick & York, Inc., 1929. Pp. xii+558. $3.00.

improve instruction in higher education. The Appendix contains bibliographies on special method, the curriculum, and problems in twelve subject-matter fields. The book includes both an author index and a topic index. It contains numerous footnote references, and about 160 pages are devoted to bibliography.

The book fills a real need and fills it with scholarly thoroughness. Bibliographical summaries have appeared in other fields, but this is the first attempt to summarize in a thorough way the investigations in the field of higher education. Even a cursory examination of the book impresses one with its thoroughness. A more careful examination leads to the conviction that it is an outstanding work. One wishes at times that the author had been more critical of the material under consideration. In spite of this objection, the value of the publication as a source book for the occasional reader as well as for the research worker is great.

ALBERT GRANT

PSYCHOLOGICAL LABORATORY, CINCINNATI PUBLIC SCHOOLS

The administration of guidance.—New movements prior to acceptance as integral phases of older and well-defined fields of social activity are usually required to demonstrate ability to make some significant or unique contribution within the field to which they seek admission. "Guidance" is a comparatively new movement. If it is to attain permanency, it must demonstrate that it has made, or can make, some specific contribution to the process of education which is not already available or cannot better be secured through other channels. It has as yet made no such demonstration. Its advocates do not agree as to its legitimate scope and functions in relation to the total process of education. A recent addition[1] to the rapidly expanding literature on guidance tends to confirm this statement rather than to assure one that progress is being made.

The title indicates that the theme of the book is administration of guidance. The purpose of the book is to present a comprehensive exhibit of the problems which arise in the prosecution of educational and vocational guidance. One hundred and forty-nine specific "problems" are presented under the headings "Educational Guidance," "Vocational Guidance," "The Personnel and Equipment for Guidance," and "Plans for Educational and Vocational Guidance." A series of questions designed to help the student in his analysis of the situation accompanies each problem.

Among the "guidance" problems are many which have long worried educational administration—for example, "The Development of Essential Attitudes and Habits," "Teaching How To Study," "Testing, Grading, Classifying, and Promoting Children," "The Need of Guidance during Vocational Courses," and "Guidance through the Home-Room Period." Indeed, no school administrator

[1] John M. Brewer and Others, *Cases in the Administration of Guidance.* New York: McGraw-Hill Book Co., Inc., 1929. Pp. xvi+304. $2.50.

worthy of the name neglects the majority of the topics which this book covers whether or not he has ever heard of the "guidance" movement. To one "doubting Thomas," at least, the administration of group activities, to which the book is confined, helpful though it may be in the ultimate adjustment of the individual, does not constitute guidance unless, of course, guidance and education are to be synonymous, in which case, why have guidance? A far more logical title for the book would seem to be "Cases in School Administration."

The book is frankly experimental and is offered as a companion volume to *Case Studies in Educational and Vocational Guidance*, which presents a series of individual guidance problems. The present book is essentially a textbook, designed to serve as the basis for group discussion, and has little value for the individual reader seeking information on guidance practices.

The authors admit the difficulty of teaching education by the case method because of the lack of agreement as to the basic principles and philosophy of education. They estimate, however, that one-third of the training of the "guidance" worker might be obtained in this way, two thirds resulting from a discussion of theory and experience.

One could wish that the authors themselves were a bit clearer on the terminology in their own field. The hopeless confusion occasioned by their use of the expression "student personnel work" is a case in point. On page 163 the question is asked in connection with a high-school problem, "Do you think the staff [boys' adviser, dean of girls, her assistant, and two counselors] available for personnel work . . . . adequate or inadequate?" Obviously, the expression "personnel work" is used here in its generally accepted sense to refer to individual advisory service. The first case in chapter xvii, however, "Personnel Administration in Public Schools," vaguely defines "personnel work" as including "many processes which are outside education" and makes guidance "only a small part of personnel work" (p. 188). The ensuing questions imply that personnel work is likely to be in "constant conflict" with the work of teachers, heads of departments, and the central administrative staff. In view of the modern conception of personnel work as a facilitating service, this implication is especially puzzling.

However, the case method of training is functioning successfully in law, medicine, and business. Why should it not have a fair trial in education? The authors of the present book have made an interesting beginning with a textbook that might be used experimentally in any course in educational administration. At least, it serves to emphasize anew the need for more careful definition and delimitation of the field of guidance if the guidance worker is to be accepted as an essential factor in education. "Why have a faculty," queried one puzzled school superintendent as he came from a meeting of guidance workers, "if these fellows do all they say they are going to do?"

DON H. TAYLOR

NATIONAL JUNIOR PERSONNEL SERVICE

A textbook in government for the senior high school.—The realization by an increasing number of experienced teachers that courses in generalized social science or problems of democracy do not meet the educational needs of advanced pupils in the secondary school has led to an enlarged demand for suitable textbooks in elementary economics and political science. A book[1] devoted to the last-named field forms a worthy addition to the limited list of similar publications.

The purpose of the new book, in the words of the authors, is "to teach intelligent citizenship to students in the two upper years of the high school. The historical development of our institutions has been stressed, with complete explanation of the practical side of government as well as the theoretical" (p. iii). The book has seven large divisions: "The Development of National Government," "The Motive Powers in a Republic," "The Work of the Federal Government," "The Work of State and Local Governments," "Special Problems of Government," "Our Neighbors," and "American Traditions." About one-half of the space is devoted to Parts Three and Four, the first of which consists of eight chapters and the second, of nine chapters. A unique feature of the book is the inclusion of chapters entitled "The Dominion of Canada" and "Latin America"—material which many teachers will regard as out of place in a book devoted to American government.

Other features of the textbook deserving special mention are the two appendixes, which contain (1) the Constitution of the United States with annotations, paragraph by paragraph, and (2) a serviceable glossary of political terms. Suggestions for additional study, consisting largely of citations to college textbooks in political science and questions on the text, are given at the end of each chapter. The book is supplied with a variety of illustrations, maps, graphs, and tables. The style and the tone of the book are indicated by the following paragraph.

> What is wrong with local government? There are several serious criticisms of local government. (1) Too many officers are elected. When we elect too many officers and tell them they are to work together, we do not always get complete co-operation, because each elected official feels he is responsible to the people directly, and not to the board of selectmen, board of supervisors, or other officials. The large number of elected officials also makes the ballot too long. (2) There is no effective means of forcing officers to do their duty. Most of our local officials administer state laws. The governor of the state is supposedly in charge of law enforcement in the state; but, if he cannot control the officers who actually do the work, how can he enforce the law? (3) Local officials sometimes work at cross purposes [p. 29].

A number of errors appear in the book. A. C. McLaughlin, not R. C. McLaughlin, is the author of *The Confederation and the Constitution* (p. 53). John Marshall was the *second* chief justice of the United States Supreme Court, not "the first" (p. 63). The manufacture and the transportation of intoxicating

[1] Herman A. Spindt and Frederick Lynn Ryan, *The Foundations of American Government*. Boston: D. C. Heath & Co., 1929. Pp. x+500. $1.80.

liquor, as well as "the sale," are prohibited by the Eighteenth Amendment (p. 77). Misleading statements or statements open to challenge are also found. Of this type are the implication that only the state government preserves order, protects persons and property from violence and robbery, and fixes contract rights (p. 17) and the statements that "each state gives some of its powers to the central government" (p. 27), that "the central government is the creation of the states" (p. 28), and that "in the powers retained by the states the state governments are all-powerful" (p. 28). Students of international law will question the inference that the right of American citizens to travel on the high seas in safety in time of war between other nations was first insisted upon by President Wilson or that the insistence on this right should be regarded as "his" policy; many students of history will also be slow to accept the statement that this policy "was responsible for our going to war with Germany in 1917" (pp. 62–63).

The publishers have done their part in making an attractive book. The paper is good; the type, clear; the format, comfortable. The book possesses merit and is worthy of examination by teachers and principals who are looking for a textbook to serve as a basis for a course in government for advanced high-school pupils.

HOWARD C. HILL

A workbook in European history.—In the teaching of history in secondary schools, increasing emphasis is being placed on the interpretation of historical data and on the significance of history itself at the expense of the traditional minutiae of past events. A new workbook in European history[1] ably illustrates and promotes this philosophical approach to history. It outlines a one-year course in the backgrounds of present civilization in a way that does not neglect the significant events of the period covered and at the same time goes far beyond the events themselves in clarifying for high-school pupils the meaning of the events in terms of the evolution of civilization. "History is to the race what memory is to the individual," says the author, and ". . . . the chapters of this book are arranged to bring the student into possession of this 'racial memory.' Each stage in the process by which mankind has come to the threshold of the modern world is made the subject of a chapter. . . . . The stage itself, and not the details, is the true object of study" (p. viii).

A New Approach to European History is intended as a workbook for the use of pupils. It divides the field covered into seven units: "How Primitive Men Laid a Basis for Civilization," "How Civilization Dawned in the Orient," "How Classical Civilization Enlightened the World," "How Classical Civilization Faded Out and Barbarism Emerged," "How the Foundations of the Modern World Were Laid in the Middle Ages," "How Widening Interests Transformed the Medieval Civilization," and "How Europe Expanded Overseas." For each unit a short overview or presentation is given which sketches in ad-

[1] E. T. Smith, *A New Approach to European History:* Students' Guide Sheets. Chicago: University of Chicago Press, 1929. Pp. xiv+122. $0.90.

mirable fashion the heart of the unit. The overview, in a sense, sets the stage for the unit and interprets the events which take place upon it. After each overview there are a brief guidance outline of the unit, a series of problems to be worked by the pupil (with suggestions for their solution), "Special Problems and Studies," and a list of good reading references. The outlines furnish the organization of the course; the problems furnish the assignments; the reading lists and references suggest the course materials; and, as has been said, the overviews give the interpretation of the whole.

The author writes in a delightful manner, and his overviews are fascinating reading. He writes with entire accuracy and undoubted scholarship. His problems for each unit are quite evidently the result of extensive and profitable classroom experience although they are not always as varied and as specific as one might desire. The reading references are well within the range of ability of high-school pupils.

The book is one which teachers of European history and heads of history departments cannot afford to ignore, embodying and combining, as it does, many of the best tendencies in educational science and in historical research. Useful as it is as a workbook for pupils, it is even more useful as a source of information and suggestions for progressive teachers.

HOWARD E. WILSON

HARVARD UNIVERSITY

The place of industrial arts in education.—Notwithstanding the tendency to emphasize vocational training in all types of industrial arts work in our schools, the exponents of industrial arts continue to direct attention to the general educational values of handwork. The purpose of a recent publication[1] is "to set forth a relationship rather than the conflict among these various phases of education [general education, education in the practical arts, and vocational education], with special emphasis upon industrial arts as a part of well-rounded education for adolescents" (p. 5). The first three chapters of the book discuss the philosophical and psychological implications of industrial arts as factors in the general education of all pupils. The major part of the book deals with the problem of teaching the industrial arts in the six-year elementary school, in the three- or four-year intermediate school, and in those schools offering advanced training. A final chapter discusses the preparation of industrial arts teachers. The first two of the three appendixes are made up of the elementary- and intermediate-school courses of study in industrial arts which are distributed by the State Department of Education of Minnesota.

In discussing the place of industrial arts in elementary education, the author advocates that the industrial arts be used to teach more effectively the academic subjects as well as to give pupils the opportunities of self-expression which lead to physical and mental development. In presenting a program of

[1] Dean M. Schweickhard, *Industrial Arts in Education*. Peoria, Illinois: Manual Arts Press, 1929. Pp. 368. $3.00.

industrial arts that correlates with the other subjects in the elementary-school curriculum, the author is not original. Bonser and Mossman (*Industrial Arts for Elementary Schools*), for example, have presented a program of industrial arts correlated with the academic work in the elementary school in a more complete fashion.

In the chapters dealing with the teaching of industrial arts in the intermediate school, the author emphasizes the importance to adolescent boys of knowledge about occupations which they can get from their work in shops. There is need in practice for the emphasis which the author places on the acquisition of knowledge about occupations as distinguished from trade training.

Throughout the book the author presents his own opinions coupled with facts gathered in special studies, which he apparently made by the questionnaire method. It is difficult at times to distinguish what the author advocates from that which is presented as current opinion and practice. In spite of this difficulty, the book directs attention to the aspects of industrial arts instruction that need emphasis in our schools. The author believes that the book serves three groups: school administrators, teachers in service, and teachers-in-training.

ROBERT WOELLNER

Two anthologies of short stories.—Textbook-publishing in the field of English literature at the secondary-school level is largely restricted at present to anthologies. There has been considerable experimentation in developing different types of anthologies, and almost every type of literature is represented by an ever increasing number of collections. This trend away from histories and manuals of literature is undoubtedly additional evidence that we are tending more and more to teach literature rather than literary history; it is equally significant of the growth of extensive rather than intensive methods of teaching literature. Two recent volumes of short stories, edited for school use, are typical examples of the anthology at its best.

Representative Modern Short Stories[1] has been edited by a man who has been for many years a keen student of the short-story form of literature. The collection is comprehensive. It contains not only stories from English and American authors but stories from Continental writers as well. The stories are arranged in such order that the reader may have a clear picture of the history of the short-story form. Beginning with Washington Irving, Professor Jessup has included stories by Scott, Balzac, Hawthorne, Poe, and Stevenson and has continued his selection from the best of the twentieth-century writers of short stories. He has chosen wisely such authors as Katherine Mansfield, Wilbur Daniel Steele, and Edith Wharton. The volume is sufficient evidence of the flexibility of style and the various techniques which short-story writing permits. From Washington Irving to Katherine Mansfield there is a wide gap in tech-

[1] *Representative Modern Short Stories.* Edited by Alexander Jessup. New York: Macmillan Co., 1929. Pp. xiv+950. $3.00.

nique as well as in time. The work of the former seems much like a short novel; that of the later writer, with its compact, highly concentrated style, almost devoid of plot, is as far removed as possible from the novel.

The volume is intended for use in colleges and in senior high schools. It is edited without study questions, but it contains one of the most helpful of bibliographies of modern short stories available for school use. The book is a worthy example of good editing and good bookmaking. It should be in all school libraries whether or not it is used as a textbook.

Notable Short Stories of Today[1] is a collection of stories edited from a point of view directly opposed in purpose to that of Jessup. The editor has deliberately limited his selection to modern writers, all but three of whom are American writers. The three non-American writers—Joseph Conrad, W. W. Jacobs, and Stacey Aumonier—are English. The editor definitely states that he sees no purpose in including in a book intended for classroom use stories of Continental authorship and no value but a historical one in including works of Irving, Poe, Stevenson, and other earlier writers. Obviously, his purpose is to present the short story as it has been developed in America after the work of O. Henry began to set a new pattern for story-writing. Knickerbocker would not admit as true short stories many of the stories included in Jessup's collection, particularly the story by Katherine Mansfield. The selections in *Notable Short Stories of Today* show a tendency toward the action story with a surprise ending. The dramatic element is strong in all the stories; the character delineation has been neglected. It must be conceded that the editor has made an admirable selection of stories of the type he chose to include. Particularly worthy are the stories by Hergesheimer, Steele, and Eleanor Kelly. The chief criticism of the volume is that it emphasizes those features of the short story which have made it the most artificial of narrative literary forms. The volume contains a good bibliography of modern stories and study notes on all stories as well as a careful analysis of the elements of short-story technique. It is most attractively printed and bound.

Probably no ideal anthology can exist for any teacher except such as he would make himself. His best recourse is to the best of those published; both of the volumes here reviewed are valuable books.

RUSSELL THOMAS

Homogeneous grouping in school systems.—A recent study[2] to determine the value of homogeneous grouping on the basis of intelligence differs from many others because it was conducted under normal conditions in various school systems. The following paragraphs from the Introduction indicate in a general way the technique employed.

[1] *Notable Short Stories of Today.* Edited by Edwin Van B. Knickerbocker. New York: Harper & Bros., 1929. Pp. xii+524. $1.20.

[2] T. Luther Purdom, *The Value of Homogeneous Grouping.* University Research Monographs, Number 1. Baltimore: Warwick & York, Inc., 1929. Pp. 100. $2.08.

There were six schools participating in this study, but only five carried the work through to completion. Some of the first-year high-school pupils in the different schools were divided for teaching purposes into homogeneous sections on the basis of the Terman group intelligence test. The results of the semester's work of these pupils measured by standardized tests and semester marks are compared with the results of other pupils who were not differentiated in any way but were taught in sections composed of pupils of all degrees of intelligence.

The pupils who are compared are approximately equal on a four-point basis—in age, in sex, in intelligence score, and in the fact that they were taught by the same teacher [p. 5].

In chapter i earlier methods of attack and measurement of results are considered under three general headings: "the grouping of children into homogeneous groups for teaching purposes on the basis of personal opinion, and measuring the results in the same manner"; "the grouping of pupils into homogeneous groups for teaching purposes on the basis of intelligence tests, school marks, and teachers' opinions, with the results measured by personal opinions, by school marks, and by effects on attendance"; "the grouping of pupils into homogeneous groups for teaching purposes on the basis of intelligence tests alone, or by intelligence tests supplemented by school marks, past records, and teachers' opinions, with the measured results checked by the use of control groups." Under each of these headings, typical studies are reported.

Chapter ii is a statement of the problem and the method of attack, and chapter iii describes the methods of measuring and interpreting the results. According to the investigator, it is in measuring and interpreting the results that the study differs markedly from previous studies. In the third chapter each school is studied separately, and the results of the standardized tests and the semester marks are shown. Chapter iv is a summary of the results in the five schools and includes seven conclusions based on these results. These conclusions are as follows:

1. Pupils in homogeneous sections do not gain more than pupils in heterogeneous sections when the results are measured by standardized tests.
2. Pupils in the homogeneous sections make lower semester grades in English but higher in algebra.
3. Pupils in the homogeneous sections do not cover more course material.
4. The semester grades do not show that the pupils in the homogeneous sections put forth greater efforts.
5. The gains made on the standardized tests and the semester grades do not show that the pupils of any degree of intelligence were favored by the homogeneous grouping.
6. Homogeneous grouping on the basis of the intelligence test does not reduce failures.
7. The semester grades given by the teachers do not agree with the opinions expressed by the teachers, even though the semester grades were made on the basis of the daily class work, monthly tests, and final examinations [p. 92].

The study should prove interesting and valuable in advanced education courses both for the concise descriptions of earlier investigations and for the techniques developed and the conclusions presented.

ROBERT B. WEAVER

A textbook in high-school debating.—Ray Keeslar Immel, dean of the School of Speech, University of Southern California, and Ruth Huston Whipple, instructor in the Northwestern High School, Detroit, have collaborated in the preparation of a book entitled *Debating for High Schools.*[1] This book is excellent in material and arrangement, and it will come close to heading the list of possible textbooks in the field.

Realizing that debate has little appeal in many schools, the authors begin their book with a chapter on the benefits of participation in debate. Perhaps nothing new is presented in this chapter and in the following chapter, "What Is a Debate Proposition?" Yet the inclusion of the material is necessary in the development of the textbook.

Chapter iii, "Analysis and Proof," and chapter v, "Evidence," are real contributions to the teaching of debate. A praiseworthy tendency throughout is the effort on the part of the authors to make modern application of the point under discussion. To illustrate: "One great trouble with us is that we tend to settle public questions without being clear in our minds as to the basis of settlement. Our thinking, what there is of it, is fuzzy. It is not clear. If someone raises the question of a larger army, we settle it with a wave of the hand. We are for it, or we are against it, but we do not know why" (p. 27).

There is an adequate chapter on sources of material. The chapter entitled "The Brief" lays emphasis on the need for a comprehension of the subject under debate far beyond the material actually used. Chapter vii is entitled "Delivery," and the final chapter, "Refutation." Each chapter closes with suggested exercises.

It would seem that the most original and consequently the most valuable material has found its way into six appended chapters: "Propositions for Debate," "Exercises in Pronunciation and Enunciation," "Model Briefs on the League of Nations," "Speeches of High School Debaters on Preceding Briefs," "Judging a Debate," and "Notes for Teachers of Debate."

In the chapter "Notes for Teachers of Debate" are some vital suggestions on "how to gain an audience": (1) The spirit of the instructor and the business manager must be optimistic. (2) The debating team must be well prepared. (3) The debate must be advertised. (4) Tickets must be sold for the debate. (5) Many pupils should be used in the management of the debate. (6) The debate should be made attractive. The details given are in themselves excellent reasons for the use of the book by every teacher of debate. If followed, they will do much toward giving modernized debate its rightful place in the development of the youth of today.

REED FULTON

BROADWAY HIGH SCHOOL, SEATTLE, WASHINGTON

[1] Ray Keeslar Immel and Ruth Huston Whipple, *Debating for High Schools.* Boston: Ginn & Co., 1929. Pp. viii+252. $1.36.

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